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An annotated catalog of Annelida types at the Museum of Nature Hamburg, Zoology. Part I: Annelida: Errantia: Aciculata: Eunicida, Myzostomida, Aciculata *incertae sedis*, and Errantia: Protodriliformia

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Abstract

We present Part I of an annotated catalog of types in the Annelida collection of the Museum of Nature Hamburg, Leibniz Institute for the Analysis of Biodiversity Change. Part I includes the type specimens of 148 nominal species and subspecies belonging to Errantia *incertae sedis* and the Errantia clades Eunicida, Myzostomida, and Protodriliformia. The species are listed under these four groupings in alphabetical order by family and original binomen or trinomen. References to original descriptions, current accepted names, and remarks detailing additional information about type status and specimen condition are included.

Key Words

Annelida, Hamburg, Polychaeta, scientific collection, taxonomy, type specimen

We dedicate this catalog to the life and work of Dr. habil. Gesa Hartmann-Schröder, whose remarkable career as an annelid taxonomist and prolific collector contributed specimens from all over the world to the Annelida collection at the Museum of Nature Hamburg.

Introduction

The Naturhistorisches Museum Hamburg was officially founded in 1843 as the municipal natural history museum of Hamburg. Its collections incorporated specimens from the Naturwissenschaftlicher Verein in Hamburg (natural history society), as well as substantial donations from the Museum Godeffroy, ships' captains and private collectors. The museum's collection of Annelida was developed by the earthworm specialist Johann Wilhelm Michaelsen (1860–1937), who worked at the museum from 1887 until his death, first as an assistant and later as curator (Monro 1937). During his time as curator, specimens from several large German expeditions were incorporated into the collection, including the Deutsche Tiefsee-Expedition (1898–1899), the Deutsche Südpolar-Expedition (1901–1903), and through

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Michaelsen's major roles in the Hamburger Magalhaensische Sammelreise (1892–1893), the Hamburger südwest-australische Forschungsreise (1905), and the Hamburger deutsch-südwestafrikanischen Studienreise (1911–1912) expeditions. A timeline outlining the history and primary custodians of the Annelida collection in Hamburg is given in Fig. 1.

The original building of the Naturhistorische Museum Hamburg was destroyed during the second World War by Allied air raids in 1943. During the war, the Annelida fluid collection was stored in unused subway tunnels and largely survived the bombings and subsequent fire. However, the slide collection and other dry preparations were destroyed. For some Eunicida type specimens described before the war, jaw structures were dissected out and are now missing from the specimen lot. It seems most likely that these jaw structures were prepared dry and were lost during the war, and these instances are noted in the catalog below whenever possible. The collection continued to grow in the 20th and 21st centuries through expeditionary work of former curators Gesa Hartmann-Schröder and Angelika Brandt (Fig. 1), as well as through external donations. A major geographic focus of the collection has been in the southern hemisphere, i.e. Africa, Australia, South America and Antarctica, but the collection is global in scope, and includes specimens from many European localities.

Today, the Annelida collection of the Museum of Nature Hamburg contains more than 3500 type specimen lots, representing the work of several prominent annelid systematists. These include: Ernst Ehlers (1835–1925), whose collection was transferred to Hamburg on permanent loan from the University of Göttingen; the aforementioned Johann Wilhelm Michaelsen; Hermann Augener (1872–1938), who was a volunteer researcher at the museum for many years (Monro 1938); and Gesa Hartmann-Schröder (1931–2022), who cared for the polychaete collection in Hamburg from 1961–1994 (Fiege et al. 2024; Fig. 1). The collection also holds some type material of species described by Adolf Eduard Grube, Paul Langerhans, and Emil Marenzeller, as well as many contemporary annelid systematists. Together, these authors described more than 2000 annelid species, and the Museum of Nature Hamburg today houses one of the largest annelid type collections in the world.

Until recently, the Annelida collection holdings were documented only in a card catalog and ledger books, and the digitization and publication of the collection's specimen metadata is ongoing. The data will be continually expanded and published online in the LIB online catalog (https://collections.leibniz-lib.de) and on the Global Biodiversity Information Facility (GBIF; https://doi.org/10.15468/cxtwpn). This work reflects a major effort to make the information contained in this globally significant collection broadly available.

Here, we present Part I of a series of annotated type catalogs for the Museum of Nature Hamburg Annelida collection. Part I includes a list of type specimens for 148 nominal species belonging to Annelida: Errantia: Aciculata: Eunicida and Myzostomida, Errantia: Aciculata *incertae sedis*, and Errantia: Protodriliformia.

Methodology

The determination of a specimen's type status is not always straightforward, as specimens were not always immediately deposited or designated along with their accession numbers. For earlier authors who did not explicitly designate types, e.g. Augener, Ehlers, Michaelsen and Grube, the types listed here are based on all available evidence, including the collection catalog notes, originally published type localities, expeditions, donors, and any other available evidence. Definitive type status could not be established in all cases, and the type designations for uncertain cases are marked by "?". Particularly in her earlier works, Hartmann-Schröder rarely cited accession numbers when designating holotype and paratype specimens in her descriptions, sometimes only stating that they were in her personal collection, which was later deposited in the

Figure 1. A timeline of curators of the Annelida collections of the Museum of Nature Hamburg, Zoology. For Andreas Schmidt-Rhaesa, current curator of Invertebrates, the * indicates the end date of his responsibility for Annelida. Photo credits: Michaelsen, von Haffner, Thiel, Dzwillo, Hartmann-Schröder, Hartmann, and Brandt © the Archives of the Museum of Nature Hamburg; Schmidt-Rhaesa and Moore © Tjorben Meier; Schwentner © Chloe Potter/NHM Wien; Ruhberg & Kerbl provided their own images.

Museum of Nature Hamburg collection. In all cases of doubt, we follow ICZN guidelines for determining type status. ICZN Article 72.4.1.1 states "For a nominal species or subspecies established before 2000, any evidence, published or unpublished, may be taken into account to determine what specimens constitute the type series." In the case of Hartmann-Schröder's earlier types, her original notes in the collection catalog and internal specimen labels are used as evidence to determine the type series and their status as holotypes or paratypes.

The catalog is arranged alphabetically within their higher-order systematic groupings (based on Rouse et al. 2022) by family and original binomen or trinomen. Specimen material citations are presented in the machine-readable format recommended by Chester et al. (2019), with interpretations, translations, and format conversions of the original data presented in square brackets. To increase the research value of this catalog, additional details about the specimens' condition, further notes and citations concerning their type status, and lists of other repositories for type specimens are provided when possible. Selected type specimens were photographed at multiple focal depths with a Canon EOS 5D Mark III DSLR camera fitted with either a 65 mm or 100 mm fixed lens and mounted on a robotic arm, and composite focal stacking images were generated using Zerene Stacker or Adobe Photoshop 2024 software.

The following abbreviations are used throughout the catalog in material citations: spm = specimen(s) of unknown completeness, cs = complete specimen, af = anterior fragment, mf = middle fragment, pf = posterior fragment, fs = fragments of undetermined type, leg. = collector (from Latin *legulus*), exped. = expedition, stat. = station.

We used the following abbreviations for specimen repositories:

AM	Australian Museum
AMNH	American Museum of Natural History
BMNH	Natural History Museum London
FSBC I	Florida Department of Natural Resources Marine Research Laboratory
MACN	Museo Argentino de Ciencias Naturales
MCZ	Museum of Comparative Zoology, Harvard University
MNHN	Museum national d'Histoire naturelle
MPW	Museum of Natural History of Wroclaw University, Poland
MZB	Museum Zoologicum Bogoriense
NHMD	Natural History Museum of Denmark
NHMLAC	Natural History Museum of Los Angeles County
NMNZ	National Museum of New Zealand, Te Papa Tongarewa
PMBC	Phuket Marine Biological Center
SAM	South Australian Museum
SIFP	Smithsonian Institution, Ft. Pierce, Florida
SMF	Senckenberg Museum Frankfurt
USNM	Smithsonian Institution, National Museum of Natural History
WAM	Western Australian Museum
ZMB	Museum für Naturkunde, Berlin
ZMH	Museum of Nature Hamburg, Zoology

Type Catalog, Part I

Annelida: Errantia: Aciculata: Eunicida

Dorvilleidae Chamberlin, 1919

Anchidorvillea moniliformis Hilbig & Blake, 1991

Paratype. United States Of America • 1 spm; NW-Atlantik [off North Carolina], ACSAR exped., stat. S1; 34°16.2'N, 75°45.8'W [34.270, -75.763]; 583 m depth; Mar. 1984; Brigitte Hilbig leg.; **ZMH-ANN-P19801**.

Remarks. The holotype (USNM 130773) and additional paratypes are deposited in the NHMLAC and USNM (Hilbig and Blake 1991).

Coralliotrocha composita Hartmann-Schröder & Rosenfeldt, 1992

Holotype. Antarctica • 1 cs; [South Shetland Islands, northwest of Elephant Island], ANT V/1 exped., FS Polarstern stat. PS09/149-4; -60.50, -55.32; 532 m depth; 12 Jun. 1986; Ute Mühlenhardt-Siegel leg.; Van Veen grab (0.1 m^2), Feinsand mit mittelgroßen (Ø 2–5 cm) Steinen [fine sand with medium sized stones (Ø 2–5 cm)]; **ZMH-ANN-P20714**.

Paratypes. Antarctica • 1 spm; same data as holotype; **ZMH-ANN-P20715** • 1 spm; [South Shetland Islands, northwest of Elephant Island], ANT V/1 exped., FS Polarstern stat. PS09/141-3; -60.55, -55.23; 227 m depth; 10 Jun. 1986; Ute Mühlenhardt-Siegel leg.; Van Veen grab (0.1 m^2), toniges Sediment [clay sediment]; **ZMH-ANN-P20716** • 1 spm; [South Shetland Islands, west of Elephant Island], ANT V/1 exped., FS Polarstern stat. PS09/145-3; -60.58, -55.04; 142 m depth; 11 Jun. 1986; Ute Mühlenhardt-Siegel leg.; Van Veen grab (0.1 m^2), tonig [clay]; **ZMH-ANN-P20717** • 1 spm; [South Shetland Islands, northwest of Elephant Island], ANT V/1 exped., FS Polarstern stat. PS09/147-3; -61.04, -55.54; 139 m depth; 11 Jun. 1986; Ute Mühlenhardt-Siegel leg.; Van Veen grab, Feinsand [fine sand]; **ZMH-ANN-P20718**.

Remarks. All types listed above were designated with their ZMH accession numbers in the original description (Hartmann-Schröder and Rosenfeldt 1992).

Dorvillea graciloides Hartmann-Schröder, 1960

accepted as *Protodorvillea egena* (Ehlers, 1913)

Holotype. Egypt • 2 mf; Rotes Meer, Abomingar [Red Sea Governorate, Hurghada, Abu Minqar Island]; 1.5–2.5 m depth; 23 Mar. 1956; Adolf Remane and Erich Schulz leg.; Mangrove-Insel, weißer Sand aus Korallen- und anderen Kalktrümmern [mangrove island, white sand from coral and other calcareous debris]; **ZMH-ANN-P14828**.

Remarks. The original description includes a remark: "*Der Typus wurde bei der Präparation völlig zerstört*" (the type was completely destroyed during preparation; Hartmann-Schröder 1960a). The holotype now consists only of two small middle fragments of a few segments each.

***Dorvillea mandapamae* Banse, 1959**
accepted as *Protodorvillea egena* (Ehlers, 1913)

Holotype and paratypes. India • LOST; Süd-Indien, Golf v. Mannar, Mandapam Camp [Tamil Nadu, Gulf of Mannar, Mandapam Camp]; 1–5 m depth; Karl Banse leg.; in fine sand; **ZMH-ANN-V13021**.

Remarks. Banse (1959) examined five specimens for the description and deposited the types in ZMH. The number of specimens is not specified in the ZMH catalog entry, but the lot contained the holotype and paratypes. The specimens were marked lost in 1972; however, no further information on the circumstances is available.

***Exallopus intermedius* Hilbig & Blake, 1991**

Paratype. United States Of America • 1 spm; NW-Atlantik [off New Jersey], ACSAR exped. stat. M5; 38°50.49'N, 72°33.01'W [38.8415, -72.5502]; 2065 m depth; Nov. 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19922**.

Remarks. The holotype (USNM 130776) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

***Microdorvillea phuketensis* Westheide, 1992**

Paratypes. Thailand • 2 spm; Thailand, Phuket, Patonga-Riff [Phuket, Pa Tong, Pa Tong reef]; 25 Oct. 1987; Wilfried Westheide leg.; **ZMH-ANN-P20470**.

Remarks. The holotype is deposited in the reference collection of the Phuket Marine Biological Centre (PMBC 7270). According to the original description, additional paratypes may exist in Westheide's private collection (Westheide 1992).

***Ophryotrocha atlantica* Hilbig & Blake, 1991**

Paratypes. United States Of America • 3 spm; NW-Atlantik [North Carolina, off Cape Hatteras], ACSAR exped. stat. S9; 35°28.3'N, 74°47.6'W [35.4717, -74.7933]; 604 m depth; Apr. 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19796**.

Remarks. The holotype (USNM 130752) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

***Ophryotrocha bifida* Hilbig & Blake, 1991**

Paratype. United States Of America • 1 spm; [off North Carolina], ACSAR exped. stat. S1; 34°16.2'N, 75°45.8'W [34.270, -75.763]; 583 m depth; Jul. 1984; Brigitte Hilbig leg.; **ZMH-ANN-P19795**.

Remarks. The holotype (USNM 130743) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

***Ophryotrocha dubia* Hartmann-Schröder, 1974**

Holotype. United Kingdom • LOST: 1 cs, juv.?; Nordwestliche Nordsee [northwestern North Sea, off Scotland], FRV Anton Dohrn stat. AD/0022; 58°27'N, 02°52'W [58.45, -2.87]; 68 m depth; 8 Jan. 1968; Institut für Meeresforschung Bremerhaven leg.; Van Veen grab (0.2 m², 1/5 gefüllt [1/5 full]); feiner Schlick u. Sand [fine mud and sand]; **ZMH-ANN-P13311**.

Remarks. The description was based only on the holotype, which was designated by its ZMH catalog number (Hartmann-Schröder 1974a). The specimen was marked lost in the catalog in 1991 with the note: "*Tier im Glas nicht mehr auffindbar*" (specimen cannot be found in jar anymore).

***Ophryotrocha gerlachi* Hartmann-Schröder, 1974**

Holotype. Denmark • LOST: 1 af; östl. Z-Nordsee [eastern central North Sea, off Denmark], FRV Anton Dohrn stat. AD/0723; 56°42'N, 6°05'E [56.70, 6.08]; 52 m depth; 19 Sept. 1969; Institut für Meeresforschung Bremerhaven leg.; Van Veen grab (0.1 m², 3/4 gefüllt [3/4 full]), kiesiger Grobsand [gravelly coarse sand]; **ZMH-ANN-P13328**.

Remarks. The description was based only on the holotype, which was designated by its ZMH accession number (Hartmann-Schröder 1974a). The specimen was marked lost in the catalog in May 2001: "*Wurm verloren gegangen*" (worm lost).

***Ophryotrocha labidion* Hilbig & Blake, 1991**

Paratypes. United States Of America • 2 spm; NW-Atlantik [off Virginia], ACSAR exped. stat. M13; 37°53.33'N, 73°45.09'W [37.8888, -73.7515]; 1613 m depth; May 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19793**.

Remarks. The holotype (USNM 130726) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

***Ophryotrocha maciolekae* Hilbig & Blake, 1991**

Paratypes. United States Of America • 5 spm; NW-Atlantik [North Carolina, off Cape Hatteras], ACSAR exped. stat. S9; 35°28.3'N, 74°47.6'W [35.4717, -74.7933]; 604 m depth; Apr. 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19789**.

Remarks. The holotype (USNM 130759) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

***Ophryotrocha mandibulata* Hilbig & Blake, 1991**

Paratype. United States Of America • 1 spm; NW-Atlantik [off Delaware] ACSAR exped. stat. M2; 38°35.98'N, 72°53.65'W [38.5997, -72.8942]; 2020 m depth; May 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19792**.

Remarks. The holotype (USNM 130738) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

Ophryotrocha obtusa Hilbig & Blake, 1991

Paratype. United States Of America • 1 spm; NW-Atlantik [off Delaware] ACSAR exped. stat. M7; 38°27.31'N, 73°03.44'W [38.4552, -73.0573]; 2100 m depth; May 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19794**.

Remarks. The holotype (USNM 130754) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

Ophryotrocha pachysoma Hilbig & Blake, 1991

Paratype. United States Of America • 1 spm; NW-Atlantik [North Carolina, off Cape Hatteras], ACSAR exped. stat. S9; 35°28.3'N, 74°47.6'W [35.4717, -74.7933]; 604 m depth; Apr. 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19791**.

Remarks. The holotype (USNM 130757) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

Ophryotrocha paralabidion Hilbig & Blake, 1991

Paratypes. United States Of America • 2 spm; NW-Atlantik [Massachusetts, off Nantucket], ACSAR exped. stat. N2; 40°57.21'N, 66°13.85'W [40.9535, -66.2308]; 2100 m depth; Jul. 1984; Brigitte Hilbig leg.; **ZMH-ANN-P19790**.

Remarks. The holotype (USNM 130745) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

Parapodrilus indicus Westheide, 1992

Holotype. India • 1 af on slide; Tamil Nadu, Ramanathapuram, Mandapam, sand beach north of refugee camp; 9°16'N, 79°08'E [9.2667, 79.1333]; 3 Feb. 1988; Wilfried Westheide leg.; **ZMH-ANN-P20469**.

Remarks. Westheide (1992) examined 11 specimens, but only designated the holotype by its accession number. The repository for the other specimens, if any, is unknown.

Parophryotrocha gesae Hilbig & Blake, 1991

Paratypes. United States Of America • 2 spm; NW-Atlantik [off New Jersey], ACSAR exped. stat. N10; 39°48.16'N, 70°05.37'W [39.8027, -70.0895]; 1220 m depth; Jul. 1986; Brigitte Hilbig leg.; **ZMH-ANN-P19800**.

Remarks. The holotype (USNM 130770) and additional paratypes are deposited in the USNM and NHMLAC (Hilbig and Blake 1991).

Parougia oregonensis Hilbig & Fiege, 2001

Paratype. United States Of America • 1 spm; Oregon, Pete Vent, FS Sonne stat. SO110/1A-4-1, ROPOS Dive 339; 44.6733, -125.1083 to 44.6700, -125.1083; 635–632 m depth; 10 Jul. 1996; Brigitte Hilbig leg.; Remotely Operated Vehicle; **ZMH-ANN-P24243**.

Remarks. The holotype (SMF 8897) and additional paratypes are deposited in the SMF and NHMLAC (Hilbig and Fiege 2001).

Petrocha notogaea von Nordheim, 1987

Paratypes. New Zealand • 2 spm on two slides; North Island, Hauraki Gulf, near Marine Laboratory of the University of Auckland at Leigh/Northland, in Goat Island Channel; approx. 36°16'10"S, 174°47'50"E [-36.2694, 174.7972]; 3–5 m depth; 12 Feb. 1985; Henning von Nordheim and Wilfried Westheide leg.; collected at high tide, in large patches of median coarse sand between subtidal reefs, in upper 8 cm of sediment; **ZMH-ANN-P18611**.

Remarks. The holotype (NMNZ W 1180) and additional paratypes are deposited in the NMNZ and AM (von Nordheim 1987).

Pettiboneia bathyalis Hilbig & Ruff, 1990

Paratypes. United States Of America • 1 spm; off New England, RV Cape Hatteras, ACSAR exped. 5 stat. N8; 40°10.3'N, 67°37.4'W [40.1717, -67.6233]; 2180 m depth; Apr. 1986; G. R. Hampson leg.; Box corer; **ZMH-ANN-P20326** • 4 spm; off New Jersey and Delaware, R/V Gyre, ACSAR exped. stat. M9; 38°17.3'N, 73°14.5'W [38.2883, -73.2417]; 2105 m depth; May 1984; James A. Blake leg.; Box corer; **ZMH-ANN-P20327**.

Remarks. The holotype (USNM 130092) and additional paratypes are deposited in the USNM and BMNH (Hilbig and Ruff 1990).

Pettiboneia brevipalpa Hilbig & Ruff, 1990

Paratypes. United States Of America • 2 spm; Alaska, Boca de Quadra, M/V Redoubt, ACSAR exped. stat. 6BQ/401; 55°16.7'N, 130°32.1'W [55.2783, -130.5350]; 140 m depth; Jul. 1980; R. L. Cimberg leg.; Van Veen grab (0.1 m^2); **ZMH-ANN-P20324** • 1 spm; Alaska, Boca de Quadra, M/V Redoubt, ACSAR exped. stat. 6BQ/802; 55°05.7'N, 130°43.3'W [55.0950, -130.7217]; 380 m depth; Jul. 1980; R. L. Cimberg leg.; Van Veen grab (0.1 m^2); **ZMH-ANN-P20325**.

Remarks. The holotype (USNM 130084) and additional paratypes are deposited in the USNM and BMNH (Hilbig and Ruff 1990).

Pettiboneia sanmatiensis Orensanz, 1973

Paratype. Argentina • 1 spm; Golfo San Matías, 4 km frente a Las Grutas [Buenos Aires Province, Mar del Plata, NW Golfo San Matías. 4 km off Las Grutas], SAO-I stat. 71-A; 15 m depth; 9 Feb. 1971; fondo arenoso [sandy bottom]; **ZMH-ANN-P19804**.

Remarks. The specimen was donated to ZMH by Orensanz and was marked as a paratype on the catalog card. The original publication does not explicitly state the

catalog numbers or repositories for the type specimens (Orensanz 1973a). A later re-description by Blake (1979) reports the holotype (MACN 27818) and additional paratypes in the MACN and USNM, but does not list the ZMH specimen. The specimens examined by Blake (1979) do not include the specimen from Station A listed in the original description (Orensanz 1973a), and we believe this specimen is the missing paratype.

***Protodorvillea bifida* Perkins, 1979**

Paratypes. United States Of America • 1 spm; Florida, St. Lucie County, Hutchinson Island, east of FPL electrical generating plant, Hutchinson Island Project stat. 69-02; 27°21'23"N, 80°13'24"W [27.3564, -80.2233]; 11.2 m depth; 3 Nov. 1971; Gallagher, Cobb and Futch leg.; Shipek grab, coarse calcareous sand, surface: 27.0 °C, 34.0‰, bottom: 26.7 °C, 34.5‰; **ZMH-ANN-P15540** • 1 spm; Florida, Lower Tampa Bay, Florida Department of Natural Resources stat. 17-3; 27°36'15"N, 82°41'22"W [27.6042, -82.6894]; 8 m depth; 29 Oct. 1963; J. Taylor and C. Saloman leg.; dredge; sand, surface: 24.2 °C, 34.16‰, bottom: 24.2 °C, 34.02‰; **ZMH-ANN-P15541**.

Remarks. The holotype (USNM 57471) and paratypes were designated by accession number in the original publication (Perkins 1979), and are deposited in the USNM, FSBC I, NHMLAC, and ZMH (above).

***Protodorvillea gaspeensis chilensis* Hartmann-Schröder, 1965**
accepted as *Meiodorvillea chilensis* (Hartmann-Schröder, 1965)

Holotype. Chile • 1 cs; [Los Lagos, Chiloé,] Golfo de Ancud, RV Chipana, Mar Chile I exped. stat. X3; 42°00'S, 73°00.5'W [-42.0000, -73.0083]; 264 m depth; 21 Mar. 1960; Gesa Hartmann-Schröder leg.; Schlick [mud], 11.5 °C, 3.81 mL/L O_2 at 250 m depth; **ZMH-ANN-P14840**.

Remarks. The holotype of the original subspecies was designated without specifying its accession number (Hartmann-Schröder 1965b), but was marked as the type in the ZMH catalog. The subspecies was later elevated to species level and reassigned to *Meiodorvillea* by Jumars (1974).

***Pseudophryotrocha eugenei* Hilbig & Blake, 1991**

Paratype. United States Of America • 1 spm; NW-Atlantik [off South Carolina], ACSAR exped. stat. S14; 32°23.64'N, 77°01.13'W [32.3940, -77.0188]; 805 m depth; Sept. 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19798**.

Remarks. The holotype (USNM 130765) and additional paratypes are deposited in the USNM and NHMLAC.

***Pseudophryotrocha gracilis* Hilbig & Blake, 1991**

Paratypes. United States Of America • 2 spm; NW-Atlantik [off North Carolina], ACSAR exped. stat. S10; 35°26.27'N, 74°41.43'W [35.4378, -74.6905]; 2003 m depth; Apr. 1985; Brigitte Hilbig leg.; **ZMH-ANN-P19799**.

Remarks. The holotype (USNM 130768) and additional paratypes are deposited in the USNM and NHMLAC.

***Pseudophryotrocha serrata* Hilbig & Blake, 1991**

Paratype. United States Of America • 1 spm; NW-Atlantik [off New England], ACSAR exped. stat. N2; 40°57.21'N, 66°13.85'W [40.9535, -66.2308]; 2100 m depth; Nov. 1984; Brigitte Hilbig leg.; **ZMH-ANN-P19797**.

Remarks. The holotype (USNM 130761) and additional paratypes are deposited in the USNM and NHMLAC.

***Pusillotrocha akessoni* Westheide and von Nordheim, 1985**

Holotype. Sweden • 1 slide; Stockholm, Kungsholmen, Kristineberg; 22 Jul. 1982; Wilfried Westheide leg.; Sublit. Interstitial [sublittoral, interstitial]; **ZMH-ANN-P18233**.

Remarks. The holotype was designated by its accession number in the original description, and two paratypes were retained in the authors' collection (Westheide and von Nordheim 1985).

***Staurocephalus cerasinus* Ehlers, 1901**
accepted as *Dorvillea cerasina* (Ehlers, 1901)
Fig. 2

Syntypes. Chile • 3 cs; Juan Fernandez [Valparaíso Region, Juan Fernández Islands]; 15 Faden [27 m]; 1898; Ludwig H. Plate leg.; zwischen *Vermetus*-Röhren [between *Vermetus* tubes]; **ZMH-ANN-PE0842**.

Remarks. Additional syntypes are listed as *siccus* (dry) in the ZMB catalog (ZMB 3734). The original description indicates that the Plate collection was deposited in Berlin (Ehlers 1901a). However, Ehlers evidently often retained representatives of his original specimens in his private collection, which was later transferred to ZMH. As a result, many of Ehlers' syntypes at ZMH have not previously been recognized as such.

***Staurocephalus neglectus* Fauvel, 1923**
accepted as *Schistomeringos neglecta* (Fauvel, 1923)

Syntypes. France • 1 cs, 1 fs; Normandy, La Manche, Cherbourg; 14 Jun. 1911; Pierre Fauvel leg.; **ZMH-ANN-P14843**.

Remarks. The specimens are marked as "Paratypoide" in the ZMH catalog, and were collected by Fauvel in Cherbourg during the timeframe cited in his original description (Fauvel 1923). They were accessioned at ZMH on 22 Sept. 1977. Because Fauvel (1923) did not explicitly designate a holotype or paratypes, we have listed these specimens as likely syntypes. Additional syntypes are in the MNHN (Poly Types 261 and 729).

Figure 2. Syntypes ZMH-ANN-PE0842 of *Staurocephalus ceracinus* Ehlers, 1901 shown in lateral (top) and dorsal (bottom) view. Scale bar: 5 mm.

***Stauronereis angolana* Augener, 1918**
accepted as *Dorvillea angolana* (Augener, 1918)

Syntypes. Angola • 10 spm; Ambrizetta [Zaire Province, N'zeto]; 6 fathoms [11 m]; Carl Georg August Hupfer leg.; **ZMH-ANN-V00886** • 1 spm; Kinsembo [Zaire Province, Kisembo]; Carl Georg August Hupfer leg.; **ZMH-ANN-V08680**.

São Tomé And Príncipe • 1 spm; Ilha das Rolas bei Ilha de São Thomé [Caue District, Ilhéu das Rolas]; Richard Greeff leg.; **ZMH-ANN-V08692**.

Remarks. The syntypes listed here account for all localities listed in the original description (Augener 1918), and no other types are known to exist.

***Stauronereis longicornis* Ehlers, 1901**
accepted as *Schistomeringos longicornis* (Ehlers, 1901)

Syntypes. Chile • 2 af, 1 pf; Isla Tenylo, bei Puerto Montt [Los Lagos, Puerto Montt, Isla Tenglo]; Fritz Lau leg.; **ZMH-ANN-V05510**.

Remarks. Ehlers (1901b) based his description on two specimens deposited in the "Hamburg Museum", and the specimens above likely represent the entire type series.

***Stauronereis mossambica* Hartmann-Schröder, 1974**
accepted as *Dorvillea mossambica* (Hartmann-Schröder, 1974)

Holotype. Mozambique • 1 cs (in 3 pieces); Xai-Xai, Sandriff bei NW [Gaza, Xai-Xai District, sand reef near NW], Hamburg African Expedition 1967, Probe [Sample] 160; 4 Oct. 1967; Gesa Hartmann-Schröder & Gerhard Hartmann leg.; Krustenbewuchs von der Vorderkante des Sandsteinriffs, Coralligène [crust growths from the front edge of sandstone reef, coralligène]; **ZMH-ANN-P14842**.

Remarks. The description was based only on the holotype, which was not designated with its catalog number (Hartmann-Schröder 1974b). The specimen is fragile and in three pieces, but appears complete, and is listed as the holotype in the ZMH catalog.

***Stauronereis roemeri* Augener, 1912**
accepted as *Dorvillea roemeri* (Augener, 1912)

Syntype. Norway • 1 spm; Spitzbergen [Svalbard and Jan Mayen, Svalbard], Deutsche Expedition in das Nördliche Eismeer, stat. 41; 1000 m depth; 1898; Römer and Schauinn leg.; **ZMH-ANN-PE0838**.

Remarks. Two additional syntypes consisting of anterior fragments are in Berlin (ZMB 6132).

***Schistomeringos pacifica* Westheide, 1977**

Holotype. Ecuador • 1 spm; Galapagos Islands, Santa Cruz, Bahía Academy, Nordseite [north side]; Jun. 1972; Wilfried Westheide leg.; unteres Eulitoral und flaches Sublitoral, grobes, detritusarmes Schillsediment [lower eulittoral and shallow sublittoral, coarse, detritus-poor shill sediment]; **ZMH-ANN-P13674**.

Remarks. The holotype accession number was given in the original description, and the paratypes were retained in the author's private collection (Westheide 1977).

***Schistomeringos paraloveni* Hartmann-Schröder, 1985**

Holotype. Australia • 1 spm; Südküste Australiens, Port Lincoln, Proper Bay, Südende der Bucht [South Australia, Port Lincoln, south end of Proper Bay], Hamburg Australian Exped. 1975, Probe [Sample] 126; 4 Dec. 1975; Gesa Hartmann-Schröder and Gerhard Hartmann leg.; oberstes Eulitoral, unter Steinen und zwischen

kleinen *Mytilus* [uppermost eulittoral, under stones and between small *Mytilus*], 20.3 °C, 38‰, 6.9 mL/L O_2; **ZMH-ANN-P18378**.

Remarks. The species was described based on the holotype only, and its accession number was specified in the description (Hartmann-Schröder 1985).

Schistomeringos pectinata Perkins, 1979

Paratypes. United States Of America • 1 spm; Florida, St. Lucie County, Hutchinson Island, east of FPL electrical generating plant, Hutchinson Island Project stat. 437-5; 27°22'08"N, 80°13'46"W [27.3689, -80.2294]; 11.8 m depth; 7 Sept. 1972; Lyons, Futch and Gallagher leg.; Shipek grab, surface: 31.2 °C, 35.0‰, bottom: 32.0 °C, 36.0‰; **ZMH-ANN-P15542** • 1 slide with maxillary apparatus of ZMH-ANN-P15542; same data as preceding; **ZMH-ANN-P16385** • 1 spm; Florida, St. Lucie County, Hutchinson Island, east of FPL electrical generating plant, Hutchinson Island Project stat. 4; 27°20'24"N, 80°13'04"W [27.3400, -80.2178]; 10.3 m depth; 14 Mar. 1972; Gallagher and Hollinger leg.; Shipek grab, surface: 31.2 °C, 35.0‰, bottom: 32.0 °C, 36.0‰; **ZMH-ANN-P15543** • 1 slide with maxillary apparatus of ZMH-ANN-P15543; same data as preceding; **ZMH-ANN-P16384**.

Remarks. The holotype (USNM 57474) and additional paratypes are in the USNM, FSBC I, and NHMLAC (Perkins 1979).

Eunicidae Berthold, 1927

Aciculomarphysa comes Hartmann-Schröder in Hartmann-Schröder and Zibrowius 1998

Paratype. New Caledonia • 1 spm; Nouméa [Loyalty Islands Province, east of Lifou Island], RV Alis, MUSORSTOM 6 stat. DW-447; 20°54.90'S, 167°19.87'E [-20.9150, 167.3312]; 460 m depth; 19 Feb. 1989; Bertrand Richer de Forges leg.; assoziiert mit Antipatharia [associated with Antipatharia]; **ZMH-ANN-P22044**.

Remarks. The holotype (MNHN-IA-TYPE 1481) and an additional paratype are in the MNHN.

Eunice antillensis Ehlers, 1887

accepted as *Leodice antillensis* (Ehlers, 1887)

Paralectotype. Gulf Of Mexico • 1 af; northwest of Dry Tortugas, US Coast Survey exped., USC&GS George S. Blake stat. 45; 25°33'N, 84°21'W [25.55, -84.35]; 101 Fd. [185 m]; 1877–1878; Alexander Agassiz leg.; **ZMH-ANN-PE0643**.

Remarks. The lectotype was designated by Fauchald (1992a) and is in the MCZ (MCZ ANNa-810), along with two additional paralectotypes. One of these is both a paralectotype of *E. antillensis* Ehlers, 1887 and the holotype of *E. stanleyi* Fauchald, 1992 (MCZ:IZ:ANNa-810-a). The second is only a paralectotype of *E. antillensis* Ehlers, 1887 (MCZ:IZ:154608; original accession number MCZ ANNa-810c).

Eunice bitorquata Grube, 1870

accepted as *Palola bitorquata* (Grube, 1870)

Holotype or syntype. Fiji • 1 cs, broken; Viti [Fiji]; Museum Godeffroy; **ZMH-ANN-V00791**.

Remarks. Grube (1870) described this species from an unknown number of specimens from the Museum Godeffroy in a brief note without figures. This specimen was examined by Grube himself, according to the card catalog, and is either the holotype or a syntype of this species. No other potential type material has been found in German collections. Fauchald (1992b, 1992a) reviewed this species but was not aware of any type material at the time.

Eunice cirribranchis Grube, 1870

Holotype or Syntype. Samoa • LOST: 1 spm, fehlt 1954 [lost 1954]; Upolu; Museum Godeffroy; **ZMH-ANN-V00792**.

Remarks. Grube's (1870) brief description does not indicate how many specimens he examined, and this specimen may have either been a syntype or the holotype. The specimen originally came from Museum Godeffroy, and was most likely lost in 1943 when the Zoological Museum of Hamburg was completely destroyed as the specimen was marked lost during the first post-war collection inventory in 1954. Fauchald (1992a) remarked "*Eunice cirribranchis* is, however, so poorly characterized that without access to the types and additional material, it must be considered indeterminable". No other potential type specimens were found in a search of German collection databases.

Eunice coccinioides Augener, 1922

Syntypes. São Tomé And Príncipe • 2 af, 4 pf, + 1 ?*Palola* fragment, + "*Eunice* Group B2" fragment; Ilha das Rolas bei Ilha São Thomé [Caué District, Ilhéu das Rolas]; Richard Greeff leg.; **ZMH-ANN-V05693**.

Equatorial Guinea • 1 cs, 2 af, 1 mf, 2 pf; Isla Annobón; 7 Oct. 1911; Arnold Schultze leg.; **ZMH-ANN-V08718**.

Remarks. Augener described these specimens under the name *Eunice fucata* Ehlers, 1887 in his work on West African polychaetes (Augener 1918), but established the new name in a short note in a later work on Caribbean polychaetes (Augener 1922b): "*Die westafrikanische so (1918) von mir benannte Art muß einen neuen Namen erhalten; ich nenne sie* Eunice coccinioides *n. sp.*" (The West African species so named by me (1918) must be given a new name; I call it *Eunice coccinioides* n. sp.).

As of this writing, the type locality is listed in WoRMS as the Caribbean Sea (Read and Fauchald 2024a), however, the specimens described by Augener (1918) and later named (Augener 1922b) are from the Gulf of Guinea (see type localities above) and the original description is based on specimens from both localities.

Fauchald listed only ZMH-ANN-V05693 as the syntypes in his revision of the genus (Fauchald 1992a), with the locality given as Isla Annobon, Angola. Fauchald also separated additional species within syntype lot ZMH-ANN-V05693 in 1986, and does not count these additional specimens among the syntypes (Fauchald 1992a). Given that all of Augener's originally listed material is accounted for in these two lots, it is unlikely that additional syntypes exist for this species.

Eunice fimbriata Grube, 1870

Syntype. Fiji • 1 cs in poor condition, partly macerated; Viti [Fiji]; Museum Godeffroy; **ZMH-ANN-V00793**.

Remarks. This species was described in brief from the Museum Godeffroy collection (Grube 1870). A second syntype is in Berlin (ZMB Q-2262). Both specimens were listed in Fauchald (1992a) as the holotype (ZMH-ANN-V00793) and paratype (ZMB Q-2262); however, they were not originally designated as such and therefore both specimens are syntypes.

Eunice gagzoi Augener, 1922

Lectotype. Haiti • 1 cs; [Ouest Department, Gonave-Azuei Region,] Port-au-Prince; C. Gagzo leg.; **ZMH-ANN-V09755**.

Paralectotype. Colombia • 1 ?cs; [Caribbean Region, Bolívar Department,] Cartagena; C. Gagzo leg.; **ZMH-ANN-V06812**.

Remarks. An additional paralectotype, ZMB 6286, from St. Thomas Sound is in Berlin. These three syntype lots together cover all localities listed in the original description (Augener 1922b), and all material reviewed by Fauchald (1992a), who redescribed the specimens and designated the lectotype.

Eunice kristiani Hartmann-Schröder in Hartmann-Schröder and Zibrowius 1998

Paratypes. Pacific Ocean • 3 spm; France, New Caledonia, Nouméa [Loyalty Islands Province, Lifou, east of Tiga Island], R/V Alis, MUSORSTOM 6 stat. DW-477; 21°07.98'S, 167°54.69'E [-21.1330, 167.9115]; 550 m depth; 22 Feb. 1989; Bertrand Richer de Forges leg.; assoziiert mit Antipatharia [associated with Antipatharia]; **ZMH-ANN-P22038**.

Remarks. The holotype and additional paratypes are in the MNHN according to the description in Hartmann-Schröder and Zibrowius (1998), but are not listed in the MNHN's online catalog, and may not have individual accession numbers.

Eunice leptocirrus Grube, 1870

Holotype. Fiji • 1 af, poor condition, partly macerated; Viti [Fiji]; Museum Godeffroy; **ZMH-ANN-V00795**.

Remarks. Grube's (1870) brief description was evidently based on a single specimen from the Museum Godeffroy. Fauchald (1992a) listed this specimen as the holotype (as "*leptocirris*").

Eunice limosa Ehlers, 1868

accepted as *Leodice limosa* (Ehlers, 1868)

Syntypes? Croatia • 2 cs, 1 mf, 1 pf; Fiume [Kvarner, Primorje-Gorski Kotar, Rijeka]; 1 May 1862–31 Aug. 1862; Ernst Ehlers leg.; **ZMH-ANN-PE0668**.

Remarks. According to the label data, these specimens were collected by Ernst Ehlers in Fiume (now Rijeka, Croatia) before his publication of this name in 1868. Fauchald (1992a) remarked that the "types are no longer available" but did not give any indication that he was aware of these specimens at the time, nor did he explicitly exclude them as original types. Given the available evidence, these specimens likely represent the original syntypes.

Eunice marianae Hartmann-Schröder in Hartmann-Schröder and Zibrowius 1998

Paratypes. Indian Ocean • 16 spm; France, Réunion, RV Marion Dufresne stat. MD32-CP57; 21°04'05"S, 55°11'00"E [-21.0681, 55.1833]; 210–227 m depth; 22 Aug. 1982; Alain Guille leg.; aus Röhren an Antipatharia [from tubes on Antipatharia]; **ZMH-ANN-P18208**.

Remarks. The holotype (MNHN-IA-TYPE1409) and additional paratypes were deposited in the MNHN and USNM.

Eunice modesta Grube, 1866

Syntype. Samoa • 1 ♀ cs in poor condition, previously dried out; Museum Godeffroy; **ZMH-ANN-V00801**.

Remarks. Grube described this species based on Samoan material in the Museum Godeffroy collection, where this specimen originated. Two additional syntypes exist: ZMB 3998 and MPW No. 281 (Wiktor 1980).

Eunice musorstomica Hartmann-Schröder, 1998

Paratypes. South Pacific Ocean • 3 cs and tube fragments; France, New Caledonia, Nouméa [Loyalty Islands Province, north side of Lifou Island], R/V Alis, MUSORSTOM 6 stat. DW-406; 20°40.65'S, 167°06.80'E [-20.6775, 167.1133]; 373 m depth; 15 Feb. 1982; Bertrand Richer de Forges leg.; mit Zick-Zack-Röhre an Antipatharia-Korallen [with zig-zag tubes on Antipatharian corals]; **ZMH-ANN-P22043** • 1 slide with 2 middle parapodia; same data as preceding; **ZMH-ANN-P22043-A**.

Remarks. According to the original description (Hartmann-Schröder 1998), the holotype and five additional paratypes were deposited in the MNHN, however none appear in the MNHN's database and may not have been assigned individual accession numbers.

Eunice parasegregata Hartmann-Schröder, 1965

Holotype. Chile • 1 fs; [Bío Bío Region, Arauco,] Punta Lavapié, RV Chipana, Mar Chile I exped. stat. 68; 37°08.7'S, 73°38.6 W [-37.1450, -73.6433]; 58 m depth; 10 Mar. 1960; Bodengreifer [bottom grab]; Feinsand mit Steinen und toten Algen [fine sand with stones and dead algae], 10.8 °C, 0.10 mL/L O_2 at 50 m depth; **ZMH-ANN-P14273**.

Paratype. Chile • 1 spm; same data as holotype; **ZMH-ANN-P14274**.

Remarks. The holotype was examined and redescribed by Fauchald (1992a), who may not have been aware of the paratype specimen. Neither specimen was designated by its accession number in the original publication (Hartmann-Schröder 1965b).

Eunice parvibranchis Grube, 1870

Syntypes. Fiji • 1 spm, poor condition, previously dried out; Viti [Fiji]; Museum Godeffroy; **ZMH-ANN-V00803**.

Samoa • 1 spm, poor condition, partly macerated; Upolu; Museum Godeffroy; **ZMH-ANN-V00804**.

Remarks. Grube described the species from the "Schiffer- und Fidschi-Inseln" (Grube 1870); "Schiffer-Inseln" is an older name for Samoa. An additional syntype from Fiji is in Berlin: ZMB Q-2266. From the ZMH collection, Fauchald (1992a) listed only ZMH-ANN-V00804 with the locality erroneously given as "Upolu, Fiji" (Upolu is in Samoa).

Eunice paucibranchis Grube, 1866

Holotype? Samoa • 1 pf; Upolu; Museum Godeffroy; **ZMH-ANN-V00805**.

Remarks. Fauchald (1992a) lists this specimen as the "?Holotype", and mentions additional parapodia in Berlin (ZMB Q-3434), which he did not believe belonged to the putative holotype specimen based on the color of the aciculae.

Eunice philippinensis Hartmann-Schröder, 1998

Paratype. Philippines • 1 spm; Philippinen [Antique Province, Culasi, east of Maniguin Island], R/V Coriolis, MUSORSTOM 3 stat. 131; 11°36.06'N, 121°43.00'E [11.6010, 121.7167]; 120–122 m depth; 5 Jun. 1985; Jacques Forest leg.; **ZMH-ANN-P22039**.

Remarks. The holotype and five additional paratype lots were deposited in the MNHN but are not listed in the online database and may not have been assigned individual accession numbers.

Eunice rubrocincta Ehlers, 1868

Fig. 3A

Syntypes. Croatia • 1 cs; Fiume [Kvarner, Primorje-Gorski Kotar, Rijeka]; 1862; Ernst Ehlers leg.; **ZMH-ANN-PE0684** • 7 cs, 4 af, 3 mf, 2 pf; same data as preceding; **ZMH-ANN-PE0685**.

Remarks. Fauchald (1992a) was evidently unaware of these syntypes. They likely represent the complete extant type series for this species, as they were collected by Ehlers and included in his personal collection, and no other original specimens are known to exist.

Eunice mutilata samoae Hartmann-Schröder, 1965

accepted as *Nicidion samoae* (Hartmann-Schröder, 1965)

Holotype. American Samoa • 1 af; Tutuila; 21 Oct. 1959; Hubert Caspers leg.; **ZMH-ANN-P14272**.

Paratype. American Samoa • 1 spm; same data as holotype; **ZMH-ANN-P15337**.

Remarks. Fauchald (1992a) examined the holotype and elevated the original subspecies to species rank. He did not examine the paratype and may not have been aware of its existence. According to Hartmann-Schröder's original labels, these specimens represent the holotype and paratype.

Eunice thomasiana Augener, 1922

accepted as *Leodice thomasiana* (Augener, 1922)

Syntype. United States Virgin Islands • 1 cs with dissected parapodia; St. Thomas Sound; Willy Georg Kükenthal and Robert Hartmeyer leg.; **ZMH-ANN-V09763**.

Remarks. A second syntype is in Berlin (ZMB 6398). Both specimens were examined and redescribed by Fauchald (1992a).

Eunice tridentata Ehlers, 1905

Holotype. Canada • 1 cs with jaws removed and separated in inner vial; Bare Id. [British Columbia, Southern Gulf Islands, Bare Island]; 1902; Hugo Hermann Schauinsland leg.; **ZMH-ANN-PE0699**.

Remarks. While Ehlers' (1905) original description does not explicitly state how many specimens were examined, Fauchald (1992a) listed this specimen as the holotype, and we follow his designation here. No other original material is known.

Eunice violaceomaculata Ehlers, 1887

Syntype? United States Of America • 1?cs with jaws removed and separated in inner vial; Tortugas [Florida, Monroe County, Dry Tortugas], USC&GS George S. Blake exped.; 1878–1879; Alexander Agassiz leg.; **ZMH-ANN-PE0709**.

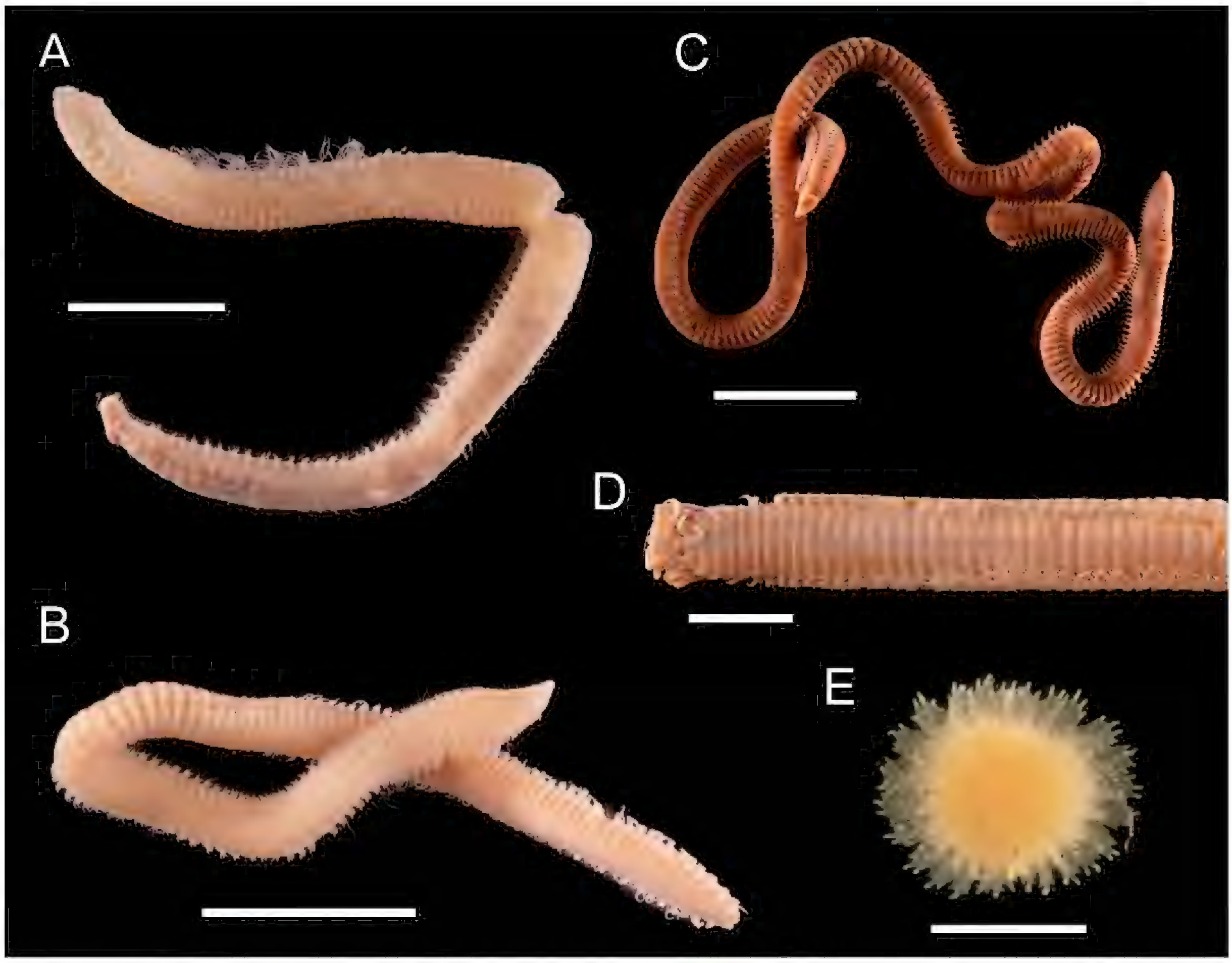

Figure 3. A. *Eunice rubrocincta* Ehlers, 1868, syntype ZMH-ANN-PE0684 in lateral view; **B.** *Lumbriconereis bifilaris* Ehlers, 1901, holotype ZMH-ANN-V05810 with anterior in dorsal view; **C.** *Notocirrus lorum* Ehlers, 1897, holotype ZMH-ANN-V01217 with anterior in dorsal view; **D.** *Rhamphobrachium chuni* Ehlers, 1908, anterior fragment of syntype ZMH-ANN-PE0759 in dorsal view; **E.** *Spinther australiensis* Augener, 1913, syntype ZMH-ANN-V10074 in dorsal view; Scale bars: 5 mm (**A–D**); 1 mm (**E**).

Remarks. According to Fauchald (1992a), four syntypes are present in the MCZ collections (MCZ 163). In his original description, Ehlers wrote "*Alle mir vorliegenden Exemplare, der Sammlung von Cambridge angehörig, stammen von Tortugas*" [All the specimens I have, belonging to the Cambridge collection, are from Tortugas] (Ehlers 1887). Because the ZMH specimen is from the same locality and expedition, it seems that Ehlers retained some exemplars of the Blake expedition material, and the specimen at ZMH likely represents an additional syntype.

Marphysa hentscheli Augener, 1931

accepted as *Nicidion hentscheli* (Augener, 1931)

Holotype. Brazil • 1 cs; Boa Viagem, b. Pernambuco [Northeast Region, Pernambuco, Recife, Boa Viagem], Deutsche Atlantik exped. 1925–1927, FS Meteor stat. 253; 11 Jan. 1927; Ernst Hentschel leg.; **ZMH-ANN-V10279**.

Remarks. Augener (1931) explicitly based the original description on a single specimen from Boa Viagem.

Marphysa mangeri Augener, 1918

Syntypes. Cameroon • 3 ?cs in two vials, marked as lectotype and paralectotype; Victoria [South-West Region, Fako Department, Limbé]; Jan. 1914; C. Manger leg.; an Pfählen [on poles]; **ZMH-ANN-V08709**.

Remarks. Augener (1918) based his description on three small specimens from Cameroon. The specimens are separated into two vials within the jar, which were marked as lectotype and paralectotypes, but the lectotype designation does not appear to be published.

Marphysa sessilobranchiata Hartmann-Schröder, 1984

Holotype. Australia • 1 spm; Südkuste-Australiens, [Western Australia], Albany, Princess Royal Harbour, Little Grove nahe Pelican Point [Little Grove near Pelican Point], Hamburg Australian Exped. 1975, Probe [Sample] 113; 22 Nov. 1975; Gesa Hartmann-Schröder and Gerhard Hartmann leg.; Feinsand, darunter feste Schicht Muschelschill [fine sand overlying firm layer of shell shill], 16.9 °C, 36.1‰, 6.9 mL/L O_2; **ZMH-ANN-P17908**.

Paratypes. Australia • 14 spm; same data as holotype; **ZMH-ANN-P17909**.

Remarks. An additional paratype specimen, AM W.198420, is listed in WoRMS (Read and Fauchald 2024d).

Marphysa soembaensis Augener, 1933

Syntypes. Indonesia • 1 af with jaws removed and separated in inner vial, 1 mf; oestlich von Sindikiri Bai, SW Soemba [East Nusa Tenggara, SW Sumba Island, east of Sindikiri Bay]; 3 Mar. 1909; Gijsbert van der Sande leg.; herausgelost aus mergelartigen, zwischen Ebbe und Flut am Strande liegenden Massen [removed from marl-like masses lying on the beach between high and low tide]; **ZMH-ANN-V12119**.

Remarks. Augener (1933) based his description on two fragmented specimens. Only one af and one mf were found in the ZMH collection. According to Pamungkas and Glasby (2019), additional type material is in the MZB.

Lumbrineridae Schmarda, 1861

Abyssoninoe orensanzi Hartmann-Schröder & Rosenfeldt, 1992

Holotype. Antarctica • 1 cs; [Antarctic Peninsula, NW of Anvers Island], FS Polarstern stat. PS09/119-5; -64.07, -65.13; 546 m depth; 2 Jun. 1986; Ute Muehlenhardt-Siegel leg.; Van Veen grab, weicher Schlick mit Detritus [soft mud with detritus]; **ZMH-ANN-P20752**.

Paratypes. Antarctica • 3 spm; same data as holotype; **ZMH-ANN-P20753** • 1 spm; [Antarctic Peninsula, NW of Adelaide], FS Polarstern stat. PS09/132-2; -66.31, -68.25; 464 m depth; 5 Jun. 1986; Ute Muehlenhardt-Siegel leg.; Van Veen grab, toniger Weichboden [soft clay bottom]; **ZMH-ANN-P20754**.

Remarks. The type specimens were designated with their accession numbers in the original publication (Hartmann-Schröder and Rosenfeldt 1992). The publication contains a typo in the coordinates of the type locality (there given as 64°63'S), which is corrected above.

Arabelloneris broomensis Hartmann-Schröder, 1979

Holotype. Australia • 1 af; Broome; Willie Creek; Gezeiten-Inlet nahe der Mündung umgeben von *Avicennia marina* und *Aegiciras corniculatumi* [Western Australia, Broome, Willie Creek, tidal inlet near estuary surrounded by *Avicennia marina* and *Aegiciras corniculatumi*], Hamburg Australian Exped. 1975, Proben (Samples) 14 & 15; 12 Sept. 1975; Gesa Hartmann-Schröder and Gerhard Hartmann leg.; Feinsand mit Lehm und Detritus [fine sand with loam and detritus], 26 °C, 37.5‰, 9.6 mL/L O_2; **ZMH-ANN-P15521**.

Paratypes. Australia • 1 af and 1 cs; same data as holotype; **ZMH-ANN-P15522**.

Remarks. Hartmann-Schröder (1979b) designated the type specimens together with their ZMH accession numbers in the original publication. No other type material exists for this species.

Lumbriconereis africana Augener, 1918
accepted as *Lumbrineris africana* Augener, 1918

Syntypes. Senegal • 2 spm; Goree [Dakar, Île de Gorée]; 11 Faden [20 m]; Carl Georg August Hupfer leg.; Salzwasser [salt water]; **ZMH-ANN-V00929**.

Ghana • 1 spm; [Greater Accra Region, Ningo-Prampram,] Prampram; 5 Faden [9 m]; Carl Georg August Hupfer leg.; Salzwasser, Steinig. Gr. [salt water, rocky bottom]; **ZMH-ANN-V01732**.

Angola • 1 spm; Landana [Cabinda Province, Cacongo]; Carl Georg August Hupfer leg.; **ZMH-ANN-V00870**.

Remarks. The locality information for the specimen from Ghana (ZMH-ANN-V01732) differs from that given in the original publication. In Augener's original description (1918), he lists the depth as 1 m, however, the entry in the ZMH card catalog lists the depth as 5 Faden [fathoms]. No other potential syntype specimens from Ghana exist in the ZMH collection. The specimen is likely the syntype, but the discrepancy in locality data introduces some doubt. The locality information given for the other specimens is less specific in Augener (1918) than in the ZMH card catalog.

Lumbriconereis bidens Ehlers, 1887
accepted as *Lumbrineris bidens* Ehlers, 1887

Syntype. Caribbean Sea • 1 spm in fragile condition, jaws removed and missing; [SW of Key West], US Coast Survey Exped., USC&GS George S. Blake Cast No. 43; 24°8'N, 82°51'W [24.13, -82.85]; 339 fathoms [620 m]; 1887; Alexander Agassiz leg.; **ZMH-ANN-PE0793**.

Remarks. Four additional syntype lots are deposited at the MCZ collection (MCZ:IZ:32023–MCZ:IZ:32026). The locality data for this specimen matches those listed in Ehlers' (1887) original description. As for other Blake expedition specimens, it appears that Ehlers retained some original specimens in his collection (see e.g. *Eunice violaceomaculata* Ehlers, 1887, above). The jaw apparatus is missing, and it may have been prepared separately and lost during WWII (see Introduction).

Lumbriconereis bifilaris Ehlers, 1901
accepted as *Lumbrineris bifilaris* Ehlers, 1901
Fig. 3B

Holotype. Chile • 1 cs; [Bío Bío Region, Concepción Province,] Talcahuano, Hamburger Magalhaensische Sammelreise 1892–1893 exped., stat. 18; 5 Faden [9 m]; 4 May 1893; Johann Wilhelm Michaelsen leg.; **ZMH-ANN-V05810**.

Remarks. According to Ehlers (1901b), the description was based on a single specimen: "*Die Beschreibung*

dieser Art ist nach dem einzigen mir bekannt gewordenen Stück gemacht" (The description of this species is based on the only specimen known to me).

***Lumbriconereis cingulata* Ehlers, 1897**
accepted as *Lumbrineris cingulata* Ehlers, 1897

Holotype. Argentina • 1 spm; [Tierra del Fuego Province] Ushuaia, Hamburger Magalhaensische Sammelreise 1892–1893 exped., stat. 117; 27 Oct. 1892; Johann Wilhelm Michaelsen leg.; Ebbestrand [tidalflat]; **ZMH-ANN-V04805**.

Remarks. Ehlers (1897) based his description on a single specimen and stated: *"Nur ein Stück dieser durch die Färbung ausgezeichneten Art liegt mir vor"* (I have only one specimen of this species, which is distinguished by its coloration).

***Lumbriconereis gracilis* Ehlers, 1868**
accepted as *Hilbigneris gracilis* (Ehlers, 1868)

Holotype. Croatia • 1 cs in two pieces, good condition; Fiume [Kvarner, Primorje-Gorski Kotar, Rijeka]; Ernst Ehlers leg.; **ZMH-ANN-PE0803**.

Remarks. This specimen was collected by Ehlers from the type locality and is most likely the holotype, as Ehlers (1868) based his description on a single specimen.

***Lumbriconereis maxillosa* Ehlers, 1918**
accepted as *Lumbrineris maxillosa* Ehlers, 1918

Syntype. Indonesia • 1 af, jaws removed and separated in inner vial; Aru Islands, nordwestlich von Ngaiboor [Aru Islands, northwest of Ngaibor], Dredgezug Nr. 2; 16 m depth; 19 Feb. 1908; Merton leg.; Dretsche [dredge]; Sand mit zahlreichen Muscheln [sand with numerous shells]; **ZMH-ANN-PE0810**.

Remarks. Ehlers (1918) based his description on two anterior fragments, and the second syntype is deposited at SMF. Pamungkas and Glasby (2019) did not list the location of the type material for this species.

***Lumbriconereis meteorana* Augener, 1931**
accepted as *Lumbrineris meteorana* Augener, 1931

Holotype? Namibia • 1 af and 1 mf; westl. Swakopmund [Erongo Region, western Swakopmund], Deutsche Atlantische Expedition, FS Meteor, stat. ME01-184b; 22°0'S, 11°7.2'E [-22.0000, 11.1200]; 3035 m depth; 13 Aug. 1926; Ernst Hentschel leg.; **ZMH-ANN-V10232**.

Remarks. The description is based on a single specimen, and gives the type locality as 17°13'S, 11°43'E and 42 m depth (Augener 1931), which conflicts with the specimen label and corresponding Deutsche Atlantische Expedition station data. The original handwritten specimen label is marked "Type!", and lists the locality as "Meteorstation 184b", and Hentschel as the collector and donor. No other specimens identified as *Lumbrineris meteorana* were found in a search of other German collection databases. Given the available evidence, this specimen is most likely the holotype, and the publication discrepancy may simply be an error.

***Lumbriconereis tingens* Keferstein, 1863**
accepted as *Lumbrineris latreilli* Audouin & Milne Edwards, 1833

Syntype? France • 1 spm; [Normandy, La Manche,] St. Vaast; 1861; **ZMH-ANN-PE0822**.

Remarks. The date of the original publication is listed as 1862 in WoRMS (Read and Fauchald 2024c); however, Band 12 of the Zeitschrift für wissenschaftliche Zoologie was published in 1863 according to the Biodiversity Heritage Library (https://www.biodiversitylibrary.org/page/44977773).

Keferstein, who worked in Göttingen with Ernst Ehlers (e.g. Keferstein and Ehlers 1861), described this species from specimens collected in Saint-Vaast-la-Hougue, France (Keferstein 1863). This specimen was included in Ernst Ehler's collection. The date given on the specimen label may represent either the year of collection or donation—this was often not specified in older material. Additional specimens collected in Saint-Vaast-la-Hougue are in the ZMB catalog, but are not marked as types there. The specimen listed above may be a syntype.

***Lumbriconereis vanhoeffeni* Michaelsen, 1898**
accepted as *Lumbrineris vanhoeffeni* Michaelsen, 1898

Syntype. Greenland • LOST: 1 spm, fehlt 1954 [lost 1954]; Karajak, Davisstrasse, bei Disco [Davis Strait, near Disko Island]; 290 m depth; 24 Jun. 1892; Ernst Vanhoeffen leg.; mit Grundzange gef. [collected by grab]; **ZMH-ANN-V04352**.

Remarks. Michaelsen (1898) described the species based on two incomplete specimens. The ZMH card catalog and ledger list the count as one for this specimen, which was likely lost during WWII. The location of the second syntype specimen is not known.

***Lumbrineris composita* Hartmann-Schröder, 1965**
accepted as *Lumbricalus composita* (Hartmann-Schröder, 1965)

Holotype. Chile • 1 af; Pta. Gloca [Maule Region, Curicó Province, Punta Iloca], RV Chipana, Mar Chile stat. 51; 34°56'S, 72°14'W [-34.93, -72.23]; 50 m depth; 5 Mar. 1960; Gesa Hartmann-Schröder leg.; Schlick mit Feinsand und viel Detritus [mud with fine sand and much detritus], 11.4 °C, 1.81 mL/L O_2; **ZMH-ANN-P14232**.

Paratypes. Chile • > 80 spm; same data as holotype; **ZMH-ANN-P15340**.

Remarks. Hartmann-Schröder designated a holotype and paratypes in the description, but these ZMH accession numbers were not listed in the publication (Hartmann-Schröder 1965b). These specimen lots have internal labels marking the type status of each.

Lumbrinerides gesae Orenzanz, 1973

Paratype. Argentina • 1 spm; [Buenos Aires Province,] Mar del Plata, Goyena II stat. 1 (Bolsa); 37°56'2"S, 57°26'4"W [-37.9339, -57.4344]; 13 m depth; 1973; Olivier, Bastida and Capitoli leg.; Sand; **ZMH-ANN-P19803**.

Remarks. The original description was based on six specimens from the same locality (Orensanz 1973b); however, the repository for the other five specimens is not known. This paratype was donated to the ZMH collection by Orensanz, who named the species in honor of the curator at the time, Gesa Hartmann-Schröder.

Lumbrinerides jonesi Perkins, 1979

Paratypes. United States Of America • 1 spm; Florida, St. Lucie County, Hutchinson Island, east of FPL Electrical Plant, Hutchinson Island Project, stat. 2; 27°21'23"N, 80°13'24"W [27.3564, -80.2233]; 11.2 m depth; 7 Sept. 1972; Lyons, Futch and Gallagher leg.; Shipek grab, surface: 29.5 °C, 33‰, bottom: 26 °C, 36‰; **ZMH-ANN-P15535** • 1 spm; same data as preceding; 14 May 1973; Gallagher, Camp and Jaap leg.; surface: 23.6 °C, 36.6‰, bottom: 22.8 °C, 36‰; **ZMH-ANN-P15536** • 2 spm and 1 slide (Kieferapparat [jaw apparatus]); same data as preceding; 3 Nov. 1971; Gallagher, Cobb and Futch leg.; Shipek grab, surface: 27 °C, 34‰, bottom: 26.7 °C, 34.5‰; **ZMH-ANN-P15537**.

Remarks. The holotype (USNM 57435) and two additional paratypes are in the USNM.

Lumbrineris annulata Hartmann-Schröder, 1960

Syntypes. Peru • 1 juv. cs, 1 af, 2 mf; [Lima Province, Chorrillos,] La Herradura; 28 Jul. 1950; Koepcke leg.; Felsküste, aus einer Kolonie von *Phragmatopoma moerchi* Kinberg [rocky coast, from a colony of *Phragmatopoma moerchi* Kinberg]; **ZMH-ANN-P15264**.

Remarks. The original description mentions an adult af and a juvenile cs in the material examined (Hartmann-Schröder 1960b), which corresponds to the specimens above. The lot was marked as the holotype in the catalog; however, because Hartmann-Schröder did not specifically designate a holotype in the description, and because the lot contains at least two individuals, we consider these specimens to be syntypes.

Lumbrineris araukensis Hartmann-Schröder, 1962

Holotype. Chile • 1 spm; [Bío Bío Region, Concepción Province,] Ramuncho; 21 Oct. 1960; Gesa Hartmann-Schröder leg.; aus Mittelsand mit Kies zwischen Geröll und mit Algen bewachsenen Felsblöcken [from medium sand with gravel between boulders and algae-covered rocks]; **ZMH-ANN-P14226**.

Paratype. Chile • 1 spm; same data as holotype; **ZMH-ANN-P14227**.

Remarks. The holotype and paratype were designated without specifying their accession numbers (Hartmann-Schröder 1962); however, the specimens each contained inner labels specifying their type status.

Lumbrineris biuncinata Hartmann-Schröder, 1960

Holotype. Peru • 1 spm; Bei Las Carpitas bei Máncora [Piura Region, Talara Province, at Las Carpitas near Máncora]; 8 Sept. 1950; Koepcke leg.; Sandstrand des Meeres in der Nähe einer Flußmündung [sandy sea beach near a river mouth]; **ZMH-ANN-P15298**.

Paratypes. Peru • 3 mf, 1 pf; Zwischen Pimentel und Eten [Chiclayo Province, Lambayeque, between Pimentel and Eten]; 18 Jan. 1953; Koepcke leg.; flacher Sandstrand mit Steinen und stellenweise algenbewachsenem Felsboden, aus der Wohnröhre von *Callianassa* [shallow sandy beach with stones and patches of algae-covered rocky ground, from the living-tube of *Callianassa*]; **ZMH-ANN-P15269**.

Remarks. Hartmann-Schröder (1960b) references five specimen fragments from the paratype locality; however, only four fragments were found in the paratype lot and the anterior is missing.

Lumbrineris dentata Hartmann-Schröder, 1965

Holotype. North Pacific Ocean • 1 cs; United States of America, Hawaii, Maui, bei Paiia [near Paia]; 2 Aug. 1959; Hubert Caspers leg.; Algenzone auf Fels [algae zone on rock]; **ZMH-ANN-P14233**.

Paratypes. United States Of America • 2 cs, 5 af, 1 ?pf; same data as holotype; **ZMH-ANN-P14234**.

Remarks. The holotype and paratypes were designated without specifying their accession numbers (Hartmann-Schröder 1965a); however, these specimen lots contain original inner labels specifying their type status. There are at least 7 individuals in the paratype lot, although the original description lists three paratypes.

Lumbrineris ernesti Perkins, 1979

Paratype. United States Of America • 1 spm; Florida, Lower Tampa Bay, stat. 18-4; 27°35'26"N, 82°45'27"W [27.5906, -82.7575]; 3 m depth; 9 Oct. 1963; Taylor and Saloman leg.; dredge; sand, with algae and *Thalassia*, surface: 25.3 °C, 34.52‰, bottom: 25.1 °C, 34.20‰; **ZMH-ANN-P15538**.

Remarks. The holotype (USNM 57438) and three additional paratypes are deposited in the USNM.

Lumbrineris homodentata Hartmann-Schröder, 1965

Holotype. Chile • 1 af; [Aysén Region, Las Huichas,] Puerto Aguirre; 10 m depth; 21 Jul. 1958; Stuardo leg.; Mytilden-Bank [Mytilid mussel reef]; **ZMH-ANN-P14236**.

Paratypen. Chile • 1 spm; same data as holotype; **ZMH-ANN-P14237**.

Remarks. The accession numbers are not given in the original description (Hartmann-Schröder 1965b); however, these specimens contain original inner labels specifying their type status.

Lumbrineris limbata Hartmann-Schröder, 1965

Holotype. Chile • 1 af; [Los Lagos Region, Llanquihue Province,] Canal Desertores, RV Chipana, Mar Chile I exped. stat. X2; 42°24'S, 72°57'W [-42.40, -72.95]; 240 m depth; 21 Mar. 1960; Schlick mit Feinsand und viel Detritus [mud with fine sand and much detritus], 12.2 °C, 4.18 mL/L O_2 in 220 m depth; **ZMH-ANN-P14242**.

Paratype. Chile • 1 juv. cs; same data as holotype; **ZMH-ANN-P15440**.

Remarks. The types were designated without accession numbers in the original description (Hartmann-Schröder 1965b), but were marked in the ZMH catalog as the holotype and paratype.

Lumbrineris lobata Hartmann-Schröder, 1960

Holotype. Peru • 1 spm; bei Pucusana bei Lima [Lima Province, at Pucusana near Lima]; 24 May 1953; Koepcke leg.; Felsufer des Meeres, nur wenig der Brandung ausgesetzt [rocky seashore, only slightly exposed to the surf]; **ZMH-ANN-P15263**.

Paratypes. Peru • 5 spm; Two localities: La Herradura, bei Lima, Felsufer, aus einer Kolonie von *Phragmatopoma moerchi* Kinberg [La Herradura, near Lima, rocky shore, from a colony of *Phragmatopoma moerchi* Kinberg], and: bei Puerto Pizarro bei Tumbes (Nordperu), Strandtümpel: Große, flache Lagune mit Sand- und Schlammgrund, von Sandstrand und Mangrovesümpfen begrenzt, mit dem Meer in Verbindung und großen Gezeitenschwankungen ausgesetzt, bei Ebbe liegen große Teile trocken [at Puerto Pizarro near Tumbes (northern Peru), beach pool: large, shallow lagoon with sand and mud bottom, bordered by sandy beach and mangrove swamps, connected to the sea and exposed to large tidal fluctuations, at low tide large parts are dry]; 28 Jul. 1950, Oct. 1950; Koepcke leg.; **ZMH-ANN-P15268**.

Remarks. The holotype and paratype were not explicitly designated in the original description (Hartmann-Schröder 1960b), and these assignments were made based on their localities and inner labels marking their type status. The paratype specimens come from two separate localities but were combined at some point and are no longer separated within the jar.

Lumbrineris magnanuchalata Hartmann-Schröder, 1959

Holotype. El Salvador • 1 spm; Salvador [La Paz Department, San Luis La Herradura, Estero Jaltepeque]; 1954–1955; Gerhard Hartmann leg.; Schlick [mud], 30 °C, 31.3‰; **ZMH-ANN-P14243**.

Paratypes. El Salvador • 4 spm; same data as holotype; **ZMH-ANN-P14244**.

Remarks. Hartmann-Schröder initially kept the type specimens in her private collection ("Typ und Paratypoide in der Sammlung der Verfasserin": Hartmann-Schröder 1959) and later deposited them at ZMH.

Lumbrineris natans Hartmann-Schröder, 1995 in Martens et al. 1995

Holotype. Indonesia • 1 spm; Airlouw, Ambon (Molukken) [Maluku Islands, Ambon Island, Airlouw]; 4 Mar. 1991; U. Heuer and J. M. Martens leg.; schwärmend [swarming], water column; **ZMH-ANN-P22062**.

Paratypes. Indonesia • 2 ♀; same data as holotype; **ZMH-ANN-P22063**.

Remarks. This species was described from a swarming stage, and the holotype and paratypes were designated by their accession numbers (Martens et al. 1995). The specimens are extremely delicate and highly fragmented due to poor preservation.

Lumbrineris orensanzi Hartmann-Schröder, 1980

Holotype. Australia • 1 af; Exmouth, "Flaming Head" Lighthouse [Western Australia, Exmouth, Vlamingh Head Lighthouse], Hamburg Australian Exped. 1975 Probe [Sample] 43; 9 Oct. 1975; Gesa Hartmann-Schröder and Gerhard Hartmann leg.; Bewuchs vom Riff (Algen und Krusten) [growth from the reef (algae and crusts)], 22.3 °C, 36.2‰; **ZMH-ANN-P16320**.

Paratypes. Australia • 4 spm; same data as holotype; **ZMH-ANN-P16321**.

Remarks. Additional paratypes are in the AM and WAM.

Lumbrineris patagonica Hartmann-Schröder, 1962

Holotype. Argentina • 1 af; San Julián [Santa Cruz Province, Puerto San Julián]; 11 Feb. 1960; Gesa Hartmann-Schröder leg.; Strand mit Steinen, die dicht mit Algen und Mytiliden bewachsen sind; die Probe stammt aus dem lehmigen Substrat, das sich zwischen den Steinen angesammelt hat [beach with stones, which are densely overgrown with seaweed and mytilids; the sample comes from the loamy substrate that has accumulated between the stones], 30.7‰; **ZMH-ANN-P14246**.

Paratypes. Argentina • 3 af; same data as holotype; **ZMH-ANN-P14247**.

Remarks. The holotype and paratype accession numbers were not specified in the original publication (Hartmann-Schröder 1962). The designations above are based on the internal specimen labels and catalog information.

Lumbrineris setosa Hartmann-Schröder, 1987

Holotype. Australia • 1 spm and 1 slide with parapodia; Port Welshpool, Bucht mit Mündung des Shady Creek, nahe westlichem Anleger, Watt vor niedriger *Avicennia*-Mangrove [Victoria, South Gippsland, Port Welshpool, bay with mouth of Shady Creek, near western pier, flats in front of low *Avicennia* mangrove], Hamburg Australian Exped. 1975 Probe [Sample] 148; 28 Dec. 1975; Gesa Hartmann-Schröder and Gerhard Hartmann leg.; weicher Sand-Schlick mit Seegras (*Rupia*) [soft sandy mud with sea grass (*Rupia*)], 21.9 °C, 37.5‰, 7.6 mL/L O_2; **ZMH-ANN-P18876**.

Paratypes. Australia • 9 spm; same data as holotype; **ZMH-ANN-P18877**.

Remarks. The holotype and paratypes were designated with their accession numbers, and additional paratypes were deposited in the AM and WAM (Hartmann-Schröder 1987).

Lumbrineris striata Hartmann-Schröder, 1962

Holotype. Chile • 1 af; [Tarapacá Region, Iquique Province,] Iquique; 23 Jul. 1960; Gesa Hartmann-Schröder leg.; aus Rhizoiden von angeschwemmter *Macrocystis* zwischen Felsen in einer Sandbucht mit Schill [from rhizoids of alluvial *Macrocystis* between rocks in a sandy bay with shill], 14.2 °C; **ZMH-ANN-P14248**.

Remarks. Under "Weiterer Fundort" (other localities), Hartmann-Schröder (1962) listed an additional anterior fragment from Arica (ZMH-ANN-P14249), but did not designate this specimen as a paratype.

Lumbrineris uncinigera Hartmann-Schröder, 1959

Holotype. El Salvador • 1 cs; La Herradura (Estero Jaltepeque); Schlick [mud], 29–30 °C, 32.3–31‰; **ZMH-ANN-P14254**.

Paratypes. El Salvador • 2 af, 1 pf; same data as holotype; **ZMH-ANN-P14255**.

Remarks. The description mentions four specimens from the same locality, and refers to them as the type and paratypes (Typ und Paratypoide; Hartmann-Schröder, 1959). The holotype lot was marked as a type; however, the paratype lot was not marked as a type in the card catalog nor within the specimen vial. The locality and count match the information given in the original description, and we consider ZMH-ANN-P14255 the paratypes.

Lumbrineris verrilli Perkins, 1979
accepted as *Scoletoma verrilli* (Perkins, 1979)

Paratypes. United States Of America • 21 spm; Florida, Lower Tampa Bay, stat. 17-10; 27°32'53"N, 82°42'27"W [27.5481, -82.7075]; 3 m depth; 4 Nov. 1963; Taylor and Saloman leg.; dredge; sand, surface: 18.9 °C, 31.02‰, bottom: 19.0 °C, 30.84‰; **ZMH-ANN-P15539**.

Remarks. The holotype is deposited in the Smithsonian Institution (USNM 57440). The many paratypes are distributed in the USNM, FSBC I, NHMLAC, SIFP, and ZMH as indicated above.

Ninoe digitatissima Augener, 1918

Holotype. Angola • 1 af; Lândana [Cabinda Province, Cacongo]; 4 Faden [7 m]; Carl Georg August Hupfer leg.; Salzwasser, sehr weicher Gr. [salt water, very soft bottom]; **ZMH-ANN-V00928**.

Remarks. Augener (1918) based his description on a single specimen from Lândana (now Cacongo, Angola). No other type material exists.

Ninoe kinbergi Ehlers, 1887

Syntype. Caribbean Sea • 1 spm; US Coast Survey Exped., USC&GS George S. Blake, Cast No. 43; 24°8'N, 82°51'W [24.13, -82.85]; 339 fathoms [620 m]; 1877; Alexander Agassiz leg.; **ZMH-ANN-PE0827**.

Remarks. Additional syntype specimens are in the collections of the MCZ, Harvard University (MCZ:IZ:ANNa-881 from stat. 49, and MCZ:IZ:ANNa-1238, also from stat. 43). As in other cases, it appears that Ehlers retained some type specimens from the Blake Expeditions in his collection.

Ninoe lagosiana Augener, 1918

Syntypes. Nigeria • 1 af; Lagos; Carl Georg August Hupfer leg.; **ZMH-ANN-V01490**.ANGOLA • 1 af; Muculla [Zaire Province, Mucula]; 4 Faden [7 m]; Carl Georg August Hupfer leg.; **ZMH-ANN-V00933**.

Remarks. Augener (1918) based his description on an anterior fragment from each of the two localities listed above. No other type material is thought to exist for this species.

Oenonidae Kinberg, 1865

Arabella cincta Hartmann-Schröder, 1962

Holotype. Chile • 1 af with jaws removed and missing; [Bío Bío Region, Concepción,] Coronel; 28 Sept. 1960; Hulot leg.; von Mytiliden-Bank an der Felsküste [from a mytilid mussel bank on the rocky shore]; **ZMH-ANN-P14217**.

Paratype. Chile • 1 cs, in two pieces; same data as holotype; **ZMH-ANN-P14216**.

Remarks. Hartmann-Schröder (1962) designated the holotype and one paratype in the original description, but these were kept in her personal collection until they were later accessioned at ZMH. The location of the holotype's jaws is unknown: they are not present in the specimen lot nor in the slide collection.

Arabella longicirrata Hartmann-Schröder, 1979
accepted as *Arabella iricolor* (Montagu, 1804)

Holotype. Portugal • 1 cs, jaws removed and missing; vor der Portugiesische Küste [off the Portuguese coast], FS Meteor, stat. ME09c-90; 37°14.7'N, 9°01.5'W [37.245, -9.025]; 114–117 m depth; 22 Jun. 1967; Hjalmar Thiel leg.; Agassiz trawl; **ZMH-ANN-P15548**.

Remarks. Hartmann-Schröder (1979a) described the species from a single specimen and specified the accession number in the text. The species was recently synonymized with *Arabella iricolor* (Montagu, 1804) by Darbyshire and Kara (2024). As above, the location of the missing jaws is unknown.

Drilonereis australiensis Augener, 1922

Holotype. Australia • 1 af; Kap York [Queensland, Somerset, Cape York]; Museum Godeffroy?; **ZMH-ANN-V09321**.

Remarks. The species description was based on a single specimen (Augener 1922a). As of this writing, the species is not listed in WoRMS (Read and Fauchald 2024b).

Drilonereis chilensis Hartmann-Schröder, 1965

Holotype. Chile • 1 af; Galera [Los Ríos Region, Valdivia Province, Punta Falsa Galera], RV Chipana, Mar Chile I exped. stat. 94; 39°59.1'S, 73°47'W [-39.9850, -73.7833]; 100 m depth; 15 Mar. 1960; Harter Feinsand [hard fine sand], 9.5 °C, 0.99 mL/L O_2 at 80 m depth; **ZMH-ANN-P14220**.

Remarks. The description was based on a single specimen, which was designated the holotype in the original publication and later given the accession number listed above. Four other specimens were listed in the publication from Mar Chile I exped. stat. 106 (later accessioned as ZMH-ANN-P15318), but were not given any type designation (Hartmann-Schröder 1965b).

Drilonereis quadrioculata Hartmann-Schröder, 1979

Holotype. Australia • 1 af; [Western Australia,] Broome, Gantheaume Point, Kliff mit Felsterrasse am Leuchtturm [cliff with rock terrace at the lighthouse], Hamburg Australian Exped. 1975 Proben (Samples) 6 & 8; 9 Sept. 1975; Gesa Hartmann-Schröder and Gerhard Hartmann leg.; Coralligène, unteres Eulitoral [coralligenous, lower eulittoral], 22.8 °C; **ZMH-ANN-P15489**.

Remarks. The description was based on a single specimen, and the holotype was designated together with the ZMH accession number given above (Hartmann-Schröder 1979b).

Notocirrus lorum Ehlers, 1897

Fig. 3C

Holotype. Argentina • 1 cs, jaws removed and missing; [off Argentina]; 49°35'S, 64°43'W [-49.5833, -64.7167]; 62 Fd. [113 m]; Kophamel leg.; **ZMH-ANN-V01217**.

Remarks. Ehlers (1897) based the description on a single specimen. Unfortunately, the jaw apparatus was dissected out and separated from the specimen. It was likely lost with the slide collection when the original museum building was destroyed.

Oenone vitiensis Grube, 1871

accepted as *Oenone fulgida* (Lamarck, 1818)

Holotype. Fiji • 1 af in poor condition, jaws removed and missing; Viti [Fiji]; Museum Godeffroy; **ZMH-ANN-V00853**.

Remarks. Grube described this species in brief but did not specify the number of specimens he examined (Grube 1871). There are no specimens listed under this name in the Wroclaw collection (Wiktor 1980). In Berlin, a single parapodium is cataloged under ZMB 3380-Q with the remark "*nur 1 Parapodium des Holotypus des Mus. Godeffroy*" ([only 1 parapodium from the holotype from Mus. Godeffroy).] The parapodium may have come from the ZMH specimen, which is likely the holotype. Unfortunately, the jaw apparatus was dissected out and is now missing and was likely destroyed (see Introduction).

Onuphidae Kinberg, 1865

Australonuphis parateres Paxton, 1979

Paratype. Australia • 1 ♀ spm; Narrabeen Beach bei Sydney [New South Wales, Sydney, Narrabeen Beach]; 33°44'S, 151°18'E [-33.73, 151.30]; 11 Nov. 1976; P. H. Colman and Hannelore Paxton leg.; **ZMH-ANN-P15408**.

Remarks. This specimen was labeled "Paratype 9" by Paxton. The holotype (AM W.11798) and many additional paratypes are deposited in the AM, BMNH, LACM, SAM, USNM, and ZMB (Paxton 1979).

Diopatra dorsalis Ehlers, 1897

accepted as *Kinbergonuphis dorsalis* (Ehlers, 1897)

Syntypes. Chile • 1 spm; Magalhaensische Straße, Punta Arenas, Strand [Magellanes y Antártica Chilena, Punta Arenas, beach], Hamburger Magalhaensische Sammelreise, stat. 71; 10 Oct. 1892; Johann Wilhelm Michaelsen leg.; im Sand des Meeresstrandes [in beach sand]; **ZMH-ANN-V04806** • 2 spm; same locality as preceding, stat. 72; 10 Oct. 1892; Strand [beach]; **ZMH-ANN-V04807** • 6 spm; same locality as preceding, stat. 95; 2 Faden [4 m]; Sept. 1892; Johann Wilhelm Michaelsen leg.; Sandgrund [sand bottom]; **ZMH-ANN-V04808** • 1 cs, broken, tube fragment; [Magellanes y Antártica Chilena,] Punta Arenas, Hamburger Magalhaensische Sammelreise, stat. 71 and 72; Sept. to Oct. 1892; Johann Wilhelm Michaelsen leg.; Meeresstrand [beach]; **ZMH-ANN-PE0768**.

Atlantic Ocean • 1 spm; Östl. Patagon. Bank [eastern Patagonian Shelf]; 44°14'S, 61°23'W [-44.23, -61.38]; 60 Faden [110 m]; Kophamel leg.; **ZMH-ANN-V01216**.

Remarks. This species was described largely from material collected during the Hamburger Magalhaensische Sammelreise, and all syntype localities are accounted for above.

Diopatra gesae Paxton, 1998

Holotype. Chile • 1 spm; [Cautín Province, Toltén,] Punta Ronca, RV Chipana, Mar Chile I exped. stat. 92; 39°03'S, 73°23.5'W [-39.0500, -73.3917]; 34 m depth; 14 Mar. 1960; Schlick mit Feinsand und Detritus [mud with fine sand and detritus], 9.9 °C, 0.98 mL/L O_2 in 30 m depth; **ZMH-ANN-P13820**.

Paratype. Chile • 1 spm; same data as holotype; **ZMH-ANN-P22019**.

Remarks. One paratype specimen was transferred to the Australian Museum (AM W.22181) from the original lot ZMH-ANN-P13820.

***Diopatra heterodentata* Hartmann-Schröder, 1965**
accepted as *Diopatra chiliensis* Quatrefages, 1866

Holotype. Chile • 1 af with tube fragment; [Curicó Province, Maule,] Punta Iloca, RV Chipana, Mar Chile I exped. stat. 51; 34°56'S, 72°14'W [-34.9333, -72.2333]; 50 m depth; 5 Mar. 1960; Schlick mit Feinsand und viel Detritus [mud with fine sand and much detritus], 11.4 °C, 1.81 mL/L O_2 in 40 m depth; **ZMH-ANN-P14283**.

Paratype. Chile • 10 spm; same data as holotype; **ZMH-ANN-P13895**.

Remarks. The holotype and paratypes were designated in the original publication without accession numbers (Hartmann-Schröder 1965b); however, the specimens above were marked as types in the ZMH catalog, and their locality data matches that given in the original publication.

***Diopatra maculata* Paxton, 1993**

Paratype. Australia • 2 spm and 1 tube; [Western Australia,] Onslow, Beadon Creek; Flacher Hang vor Mangrove [flat slope in front of mangrove], Hamburg Australian Exped. 1975 Probe [Sample] 42; 7 Oct. 1975; Gesa Hartmann-Schröder and Gerhard Hartmann leg.; Feinsand mit Lehm und Detritus [fine sand with clay and detritus], 21.5 °C, 39‰; **ZMH-ANN-P16650**.

Remarks. The holotype (AM W.19748) and three paratype lots were deposited at the Australian Museum, and one paratype is deposited at the Museum and Art Gallery of the Northern Territory (Darwin, Australia; NTM W4808). The ZMH paratype above was referenced by its accession number in the original publication (Paxton 1993).

***Diopatra monroviensis* Augener, 1918**

Syntypes. Liberia • 1 tube fragment; Groß-Bassa [Grand Bassa County]; 8 Fd. [15 m]; Carl Georg August Hupfer leg.; Salzwasser, Muddgrund [salt water, mud bottom]; **ZMH-ANN-V00732** • 2 af and tube fragments; [Montserrado, Greater Monrovia] Monrovia; 6 Fd. [11 m]; Carl Georg August Hupfer leg.; Salzw. [salt water]; **ZMH-ANN-V00736** • 3 af and tube fragments; same data as preceding; **ZMH-ANN-V00737**.

Gabon • 1 tube only; Fluss Nyanga [Nyanga River]; 6 Faden [11 m]; Carl Georg August Hupfer leg.; weicher Grund [soft bottom]; **ZMH-ANN-V00734** • 1 tube fragment; Gabon; 10 Faden [18 m]; Carl Georg August Hupfer leg.; Salzwasser, Muddgrund [salt water, mud bottom]; **ZMH-ANN-V00910**.

Benin • 1 tube fragment; Whydah [Atlantique Department, Ouidah]; 7 Faden [13 m]; Carl Georg August Hupfer leg.; Salzwasser, Muddgrund [salt water, mud bottom]; **ZMH-ANN-V00909**.

Remarks. ZMH-ANN-V00736 and ZMH-ANN-V00737 are referenced in the description by accession number (Augener 1918); however, the locality information for the other specimens is referenced therein and are here considered part of the syntype series.

***Diopatra musseraensis* Augener, 1918**

Holotype. Angola • 1 af; Mussera [Zaire Province, Musserra]; 6 Faden [11 m]; Carl Georg August Hupfer leg.; Salzwasser, Steiniger Boden [salt water, stony ground]; **ZMH-ANN-V00907**.

Remarks. Augener (1918) based his description on the single specimen above but did not reference the accession number.

***Diopatra rhizoicola* Hartmann-Schröder, 1960**
accepted as *Diopatra chiliensis* Quatrefages, 1866

Holotype. Peru • 1 af; Pucusana bei Lima [Pucusana, near Lima]; 30 Dec. 1950; Hans-Wilhelm Koepcke leg.; aus Rhizoiden von Braunalgen [from rhizoids of brown algae]; **ZMH-ANN-P15274**.

Paratype?. Peru • 1 af and tube fragments; Insel San Lorenzo bei Lima [San Lorenzo Island, near Lima]; 1 Oct. 1952; Hans-Wilhelm Koepcke leg.; gedretscht [dredged], Untergrund: Sand, Schill mit Algen [substrate: sand, shill with algae]; **ZMH-ANN-P15273**.

Remarks. The paratype designation of ZMH-ANN-P15273 is questionable. Paxton (1998) lists ZMH-ANN-P15273 as a paratype of *D. rhizoicola*; however, Hartmann-Schröder (1960b) included the statement "*Das der Beschreibung zugrunde gelegte Exemplar ist ein Bruchstück mit 119 Segmenten*" (The specimen on which the description is based is a fragment with 119 segments) and listed only Pucusana as the type locality. Neither a holotype nor a paratype was explicitly designated in the publication, but the catalog entry for ZMH-ANN-P15274 is marked as the holotype in the collection catalog and as the "Typ" on a label within the jar. The card catalog entry for ZMH-ANN-P15273 is marked paratype, but it appears to have been done later as the specimen jar does not contain any original labels marking it as a type. We include the paratype designation here with some doubt.

***Diopatra spiribranchis* Augener, 1906**
accepted as *Diopatra cuprea* (Bosc, 1802)

Syntype. Trinidad And Tobago • 1 af; Westindien [north of Trinidad and Tobago], US Coast Survey Exped., USC&GS George S. Blake [stat. unknown]; 11°5'N, 61°17'W [11.0833, -61.2833]; 87 Fd. [159 m]; 1879; E. Cole leg.; **ZMH-ANN-PE0781**.

Remarks. Augener (1906) reported that most of the material he examined was severely macerated. The specimen listed above was collected from the type locality, and Paxton examined the specimen and marked it as a syntype for the species. An additional syntype is deposited at the MCZ (MCZ:IZ:ANNc-2336).

***Epidiopatra drewinensis* Augener, 1918**
accepted as *Diopatra drewinensis* (Augener, 1918)

Syntypes. Côte D'ivoire • 1 spm; Little Drewin [Bas-Sassandra District, Dréwin]; 18 Faden [33 m]; 12 Jul. 1887; Carl Georg August Hupfer leg.; gelber Mudd [yellow mud]; **ZMH-ANN-V00898** • 1 spm; Wappu [Bas-Sassandra District, Kablaké Wappou]; Carl Georg August Hupfer leg.; **ZMH-ANN-V08675**.

Gabon • 1 spm; Fluss Nyanga [Nyanga River]; 7 Faden [13 m]; Carl Georg August Hupfer leg.; Muddgrund; Salzwasser [mud bottom; salt water]; **ZMH-ANN-V00900**.

Ghana • 1 spm; [Central Region,] Elmina; 5 1/2 Faden [11 m]; Carl Georg August Hupfer leg.; weicher Grund [soft bottom]; **ZMH-ANN-V01705**.

Remarks. Augener (1918) remarked on the mutilated condition of the syntypes and listed each of the localities given above in the original description.

***Epidiopatra hupferiana* Augener, 1918**
accepted as *Diopatra hupferiana* (Augener, 1918)

Syntypes. Senegal • 1 af; Gorée [Dakar, Île de Gorée]; 12 Faden [22 m]; 15 Feb.; Carl Georg August Hupfer leg.; Salzwasser, Sand- und Steingrund [salt water, sand and stone bottom]; **ZMH-ANN-V00750** • 2 af; same data as preceding; **ZMH-ANN-V00919** • 5 af, 1 SEM stub; Gorée [Dakar, Île de Gorée]; 11 Faden [20 m]; 15 Feb.; Carl Georg August Hupfer leg.; Salzwasser [salt water]; **ZMH-ANN-V00911** • 5 af, 1 SEM stub; Gorée [Dakar, Île de Gorée]; 13 Faden [24 m]; 15 Feb.; Carl Georg August Hupfer leg.; **ZMH-ANN-V00915**.

Remarks. Only ZMH-ANN-V00911 and ZMH-ANN-V00919 are referenced by accession number in the text; however, Augener (1918) examined specimens from several different lots for the description.

***Heptaceras hyllebergi* Nateewathana, 1988**

Paratype. Thailand • 1 af; west coast of Phuket Island, Kata Beach; 27 Oct. 1985; Anuwat Nateewathana leg.; sand, intertidal; **ZMH-ANN-P19068**.

Remarks. The holotype (PMBC 4696) and one paratype (PMBC 4697) are deposited in the Phuket Marine Biological Center, Thailand; additional paratypes are deposited at AM, BMNH, USNM, and NHMD (Nateewathana 1988).

***Mooreonuphis jonesi* Fauchald, 1982**

Paratypes. Bermuda • 2 spm; St. George's Parish, Coney Island, north side in fairly sheltered bay; 1 m depth; 1 Jun. 1976; M. L. Jones leg.; clean white to dark grey sand; **ZMH-ANN-P17144**.

Remarks. The holotype is deposited in the Smithsonian collection (USNM 72787). Additional paratypes are deposited in the AM, NHMLAC, USNM, and the Zoological Institute of the Russian Academy of Sciences (Fauchald 1982a).

***Nothria heterouncinata* Hartmann-Schröder, 1965**
accepted as *Kinbergonuphis heterouncinata* (Hartmann-Schröder, 1965)

Holotype. Chile • 1 af; Metalqui, Chiloë [Los Lagos Region, Chiloé Province, Isla Grande de la Chiloé], RV Chipana, Mar Chile I exped. stat. 109; 42°16.5'S, 74°15'W [-42.2750, -74.2500]; 44 m depth; 18 Mar. 1960; Feinsand mit Algen und Polychaetenröhren, kaum Detritus [fine sand with algae and polychaete tubes, almost no detritus], 9.9 °C and 3.82 mL/L O_2 at 40 m, Dretsche [dredge]; **ZMH-ANN-P14289**.

Remarks. Hartmann-Schröder (1965b) only designated a holotype for this species without referencing an accession number. This specimen is marked in the ZMH catalog as the holotype.

***Onuphis africana* Augener, 1918**
accepted as *Nothria africana* (Augener, 1918)

Syntypes. Gabon • 1 af; Französ.-Kongo, Nyanga-Fluß [Nyanga River]; 7 Faden [13 m]; 16 Mar. 1888; Carl Georg August Hupfer leg.; Salzwasser [salt water]; **ZMH-ANN-V00745** • 1 af; Französ.-Kongo, Nyanga-Fluß [Nyanga River]; 6 Faden [11 m]; Carl Georg August Hupfer leg.; weicher Grund [soft bottom]; **ZMH-ANN-V00918**.

Togo • 1 af; Porto Seguro [Maritime Region, Agbodrafo]; 6 Faden [11 m]; Carl Georg August Hupfer leg.; Salzwasser [salt water]; **ZMH-ANN-V00747**.

Benin • 2 af; Whydah [Atlantique Department, Ouidah]; 7 Faden [13 m]; 16 Mar. 1888; Carl Georg August Hupfer leg.; Salzwasser; Muddgrund [salt water; mud bottom]; **ZMH-ANN-V00749** • 3 af; Grand Popo [Mono Department, Grand-Popo]; 6 Faden [11 m]; Carl Georg August Hupfer leg.; Salzwasser [salt water]; **ZMH-ANN-V00920**.

Liberia • 3 af; Sinoe [Sinoe County]; 7 1/2 Faden [14 m]; Carl Georg August Hupfer leg.; **ZMH-ANN-V00916**.

Remarks. Augener (1918) based his description on six small specimens; however, the six specimen lots listed here were marked as types in the ZMH catalog (as "Orig.") and total 11 individuals. Another specimen lot (ZMH-ANN-V00746), collected in Mumford, Ghana by Hupfer, was identified by Augener as *O. africana* but was not marked as a type in the catalog. This specimen was marked as lost in 1954.

***Onuphis aucklandensis* Augener, 1924**

Paralectotypes. New Zealand • 4 spm; Auckland, Tiri Tiri [North Island, Auckland, Tiritiri Matangi Island]; 15 Faden [27 m]; 28 Dec. 1914; Theodor Mortensen leg.; Schlammgrund [mud ground]; **ZMH-ANN-V09462**.

Remarks. Fauchald (1982b) designated the lectotype (NHMD109297) from syntypes at the NHMD. He did not refer to the ZMH syntypes in the publication and may not have been aware of them. Fourteen additional paralectotypes (NHMD109298) are deposited in the NHM Denmark.

Onuphis augeneri Arias, 2016

Holotype. Gabon • 1 spm; Nyanga-Fluss [Nyanga Province, Nyanga River]; 6 Faden [11 m]; Carl Georg August Hupfer leg.; weicher Grund [soft bottom]; also paralectotype of *O. landanaensis* Augener, 1918; **ZMH-ANN-V00868**.

Paratypes. Gabon • 3 spm; same data as holotype; also paralectotypes of *O. landanaensis* Augener, 1918; **ZMH-ANN-P27820** • 1 SEM stub; same data as holotype; also paralectotypes of *O. landanaensis* Augener, 1918; **ZMH-ANN-P27821.**

Remarks. Arias (2016) described this species from part of the syntypes of *Onuphis landanaensis* Augener, 1918, and designated a lectotype for that species (see below). Therefore, these specimens are also paralectotypes of *O. landanaensis* Augener, 1918.

Onuphis brevicirris Hartmann-Schröder, 1959

Holotype. El Salvador • 1 cs, possibly juv.; La Herradura (Estero Jaltapeque); Gerhard Hartmann leg.; **ZMH-ANN-P14290**.

Paratypes. El Salvador • 14 cs, 5 af, many mf and pf; same data as holotype; **ZMH-ANN-P14291**.

Remarks. The holotype contains an inner label "Typ"; however, the paratype lot does not contain any reference to its type status and was not marked as such in the card catalog. Because a holotype and paratypes are mentioned in the description (Hartmann-Schröder 1959), and these specimens are the only representatives of this species in the collection, we consider these specimens the paratypes.

Fauchald (1982b) examined the holotype, re-identified it as a juvenile *Diopatra* species, and considered the species invalid. He may not have been aware of the paratypes.

Onuphis (*Paronuphis*) *gracilis* Ehlers, 1887

accepted as *Hyalinoecia artifex* Verrill, 1880

Syntype. United States Of America • 1 fragment with tube; off Pacific Reef [Florida, Monroe County], US Coast Survey Exped., USC&GS Bibb Cast No. 7; 25°23'15"N, 79°59'15"W [25.3875, -79.9875]; 233 fms [426 m]; 13 May 1869; Alexander Agassiz leg.; **ZMH-ANN-PE0742**.

Remarks. Four additional syntype lots are in the MCZ. The species was considered an immature phase of *Hyalinoecia artifex* Verrilli, 1880 by Mangum and Rhodes (1970), who synonymized the species.

Onuphis (*Onuphis*) *iberica* Hartmann-Schröder, 1975

accepted as *Paradiopatra ehlersi* (McIntosh, 1885)

Holotype. Atlantic Ocean • 1 af; Iberische Tiefsee [Iberian Deep Sea], FS Meteor, stat. ME03/1-024/103; 42.4467, -14.8167 to 42.6817, -14.8200; 5325 m depth; 11–12 Mar. 1966; Hans Kautsky leg.; Agassiz trawl; **ZMH-ANN-P13627**.

Paratype. Atlantic Ocean • 1 cs; same data as holotype; **ZMH-ANN-P13628**.

Remarks. The species was synonymized with *Paradiopatra ehlersi* (McIntosh, 1885) by Budaeva and Fauchald (2011).

Onuphis landanaensis Augener, 1918

Lectotype. Benin • 1 spm; Dahomey, Whydah [Atlantique Department, Ouidah]; Carl Georg August Hupfer leg.; **ZMH-ANN-V08674**.

Paralectotypes. Benin • 1 spm; same data as lectotype; **ZMH-ANN-P27822**.

Angola • 1 spm; Cabinda, Landana [Cabinda Province, Cacongo]; Carl Georg August Hupfer leg.; **ZMH-ANN-V00748**.

Gabon • 1 spm; Französ-Kongo, Nyanga-Fluss [Nyanga Province, Nyanga River]; 6 Faden [11 m]; Carl Georg August Hupfer leg.; weicher Grund [soft bottom]; also holotype of *O. augeneri* Arias, 2016; **ZMH-ANN-V00868** • 3 spm; same data as preceding; also paratypes of *O. augeneri* Arias, 2016; **ZMH-ANN-P27820** • 1 SEM prep.; same data as preceding; also paratype of *O. augeneri* Arias, 2016; **ZMH-ANN-P27821**.

Liberia • 1 af; Sess-Town [Grand Kru County, Sasstown]; 23 m depth; Carl Georg August Hupfer leg.; Muddgrund [mud bottom], in porösem Stein [in porous stone]; **ZMH-ANN-V08673**.

Remarks. The lectotype was designated by Arias (2016), who examined syntypes from Benin and Gabon, and described *O. augeneri* Arias, 2016 from the Gabon specimens. The additional paralectotypes listed above from Liberia and Angola were specified by locality in the original description (Augener 1918).

Onuphis mariahirsuta Paxton, 1979

accepted as *Hirsutonuphis mariahirsuta* (Paxton, 1979)

Paratype. Australia • 1 spm; New South Wales, Coffs Harbour, Boambee Beach; 30°18'S, 153°08'E [-30.3000, 153.1333]; 2 Feb. 1977; P. Flegg leg.; **ZMH-ANN-P15410**.

Remarks. This specimen was marked as "Paratype 8". The holotype (AM W.11799), and 19 additional paratypes are deposited in the AM, BMNH, NHMLAC, USNM, and ZMB (Paxton, 1979).

Onuphis multidentata Hartmann-Schröder, 1960

accepted as *Kinbergonuphis multidentata* (Hartmann-Schröder, 1960)

Holotype. Peru • 1 af, 1 mf; bei Pucusana bei Lima [Lima Province, at Pucusana near Lima]; 3–4 m depth; 30 Dec. 1950; Hans-Wilhelm Koepcke leg.; gedretscht [dredged], Untergrund: grober, scharfkantiger Steinschotter und Schill [substrate: coarse, sharp-edged stone gravel and shill]; **ZMH-ANN-P15270**.

Remarks. The description was based only on the fragmented holotype, which was designated without its accession number.

***Onuphis striata* Hartmann-Schröder, 1965**
accepted as *Kinbergonuphis lineata* (Fauchald, 1980)

Holotype. Chile • 1 cs; [Bío Bío Region, Arauco,] Punta Lavapié, RV Chipana, Mar Chile I exped. stat. 68; 37°08.7'S, 73°38.6'W [-37.1450, -73.6433]; 58 m depth; 10 Mar. 1960; Bodengreifer [bottom grab]; Feinsand mit Steinen und toten Algen [fine sand with stones and dead algae], 10.8 °C, 0.10 mL/L O_2 at 50 m depth; **ZMH-ANN-P14293**.

Remarks. The species name *Onuphis striata* was preoccupied by *O. striata* Uschakov, 1950, and this species name was subsequently given the replacement name *O. lineata* by Fauchald (1980).

***Onuphis taeniata* Paxton, 1979**
accepted as *Kinbergonuphis taeniata* (Paxton, 1979)

Paratype. Australia • 1 spm; Queensland, Mackay, Town Beach; 21°09'S, 149°12'E [-21.1500, 149.2000]; 5 Sept. 1977; Hannelore Paxton and J. Paxton leg.; **ZMH-ANN-P15409**.

Remarks. The holotype is deposited in the Australian Museum (AM W.15102). This specimen was marked "Paratype 6", and 11 additional paratypes are deposited in the AM, BMNH, NHMLAC, USNM, and ZMB collections (Paxton 1979).

***Parhyalinoecia apalpata* Hartmann-Schröder, 1975**
accepted as *Leptoecia apalpata* (Hartmann-Schröder, 1975)

Holotype. Atlantic Ocean • 1 af; Iberische Tiefsee [Iberian Deep Sea], FS Meteor stat. ME03/1-037/99; 42.1050, -14.7000 to 42.1350, -14.5117; 5330 m depth; 18–19 Mar. 1966; Hans Kautsky leg.; Agassiz trawl; **ZMH-ANN-P13630**.

Remarks. Hartmann-Schröder (1975) established the genus *Parhyalinoecia* for this species, which was later synonymized with *Leptoecia* Chamberlin, 1919 by Paxton (1986a). The accession number of the holotype was given in the original description (Hartmann-Schröder 1975).

***Rhamphobrachium agassizi* Ehlers, 1887**

Paralectotypes. United States Of America • 1 af + tube frag.; Florida, US Coast Survey Exped., USC&GS George S. Blake stat. 44; 25°33'N, 84°35'W [25.5500, -84.5833]; 539 fms [986 m]; 1878–1879; **ZMH-ANN-PE0760** • 1 spm; same data as preceding; **ZMH-ANN-V03245**.

Remarks. Paxton (1986b) reviewed the syntypes deposited in the MCZ collections and designated a lectotype (MCZ:IZ:ANNa-789). She also re-identified the remaining MCZ paralectotypes as *Rhamphobrachium* (*Spinigerium*) *brevibrachiatum* (Ehlers 1874). The specimens listed above were collected from one of the syntype localities listed in the original description (Ehlers 1887) and are additional paralectotypes for this species.

***Rhamphobrachium chuni* Ehlers, 1908**
Fig. 3D

Syntype. Indonesia • 1 fs in three pieces, poor condition; Im Nias Süd Kanal [North Sumatra, Nias, south channel], Deutsche Tiefsee Exped., SS Valdivia, stat. 198; 0°16'N, 98°7'E [0.2667, 98.1167]; 677 m depth; 1898–1899; Carl Chun leg.; **ZMH-ANN-PE0759**.

Remarks. Ehlers (1908) based his description on one specimen dissected out of its tube; however, three localities are listed after the description. Another syntype from *Valdivia* stat. 258 is in the Berlin collection (ZMB 4446). At least one additional syntype should exist but has not been located.

Annelida: Errantia: Aciculata: Myzostomida

Protomyzostomidae Stummer-Traunfels, 1926

***Protomyzostomum glanduliferum* Bartsch & Faubel, 1995**

Holotype. Antarctica • 143 slides (3.5 µm transverse sections); Weddell Sea, FS Polarstern stat. PS04/428; -75.5183, -57.8617; 531 m depth; 6 Feb. 1984; J. Voss leg.; parasitic in ventral coelom of *Ophiacantha disjuncta* Koehler, host with 10 mm disc diameter; **ZMH-ANN-P23020**.

Paratypes. Antarctica • 2 spm; same data as holotype; **ZMH-ANN-P23021-A** • 1 cleared spm as whole slide mount; same data as holotype; **ZMH-ANN-P23021-B** • 1 slide, parapodial support rods and hooks of ZMH-ANN-P23021-A; same data as holotype; **ZMH-ANN-P23021-C**.

Remarks. The specimens were originally designated according to their base accession numbers (Bartsch and Faubel 1995); however, letters were added later to the paratype accession numbers to differentiate the preparations. Additional paratypes were deposited in the NHMD and the private collection of Ilse Bartsch (Bartsch and Faubel 1995).

Annelida: Errantia: Aciculata *incertae sedis*

Aberrantidae Wolf, 1987

***Aberranta enigmatica* Hartman, 1965**

Syntype. United States Of America • 1 spm; off New England, east of upper end of Block Canyon, RV Atlantis, stat. S1/3; 39°58'24"N, 70°40'18"W [39.9733, -70.6717]; 300 m depth; 28 Aug. 1962; Allan Hancock Foundation leg.; **ZMH-ANN-P13582**.

Remarks. This specimen was listed in the catalog as a paratype; however, Hartman (1965) based the description on several specimens from the same locality without explicitly designating their type status. Mackie et al. (2005) list nine additional syntypes at LACM (LACM Poly 0912) and 40 additional specimens from the same locality at USNM.

Nerillidae Levinsen, 1883

***Mesonerilla ecuadoriensis* Schmidt & Westheide, 1977**

Holotype. Ecuador • 1 cs; Galapagos-Inseln [Galápagos], Santa Cruz, Bahía Academy, Nordseite [north side]; 0.5–1.5 m depth; May 1972 to Feb. 1973; Wilfried Westheide leg.; detritusreicher Grobsand und Feinkies [detritus-rich coarse sand and fine gravel]; **ZMH-ANN-P13665**.

Remarks. The description was based on several specimens, but only a holotype was explicitly designated and its accession number was included (Schmidt and Westheide 1977). As of this writing, the species is not listed in WoRMS (Read and Fauchald 2024e), but appears to be a valid species.

***Nerilla parva* Schmidt & Westheide, 1977**

Holotype. Ecuador • 1 cs; Galapagos-Inseln [Galápagos], Santa Cruz, Bahía Academy, Nordseite [north side]; 16 Sept. 1972; Wilfried Westheide leg.; in Grobsand und Schill des Eulitorals [in eulittoral coarse sand and shill]; **ZMH-ANN-P13666**.

Remarks. The description was based on 12 or more specimens, but only a holotype was designated, and its accession number is listed in the original description (Schmidt and Westheide 1977).

***Nerillidium lothari* Schmidt & Westheide, 1977**

Holotype. Ecuador • 1 cs; Galapagos-Inseln [Galápagos], Santa Cruz, Puerto Nuñez; Feb. 1972; Wilfried Westheide leg.; im Übergangsbereich vom Eu- zum Sublitoral [in the transition area from eu- to sublittoral]; **ZMH-ANN-P13667**.

Remarks. The description was based on at least 10 specimens; however, only a holotype was designated, and its accession number was included (Schmidt and Westheide 1977). As of this writing, the species is not listed in WoRMS (Read and Fauchald 2024f), but appears to be valid.

Spintheridae Augener, 1913

***Spinther australiensis* Augener, 1913**
Fig. 3E

Syntypes. Australia • 1 cs; [Western Australia,] Bunbury, Koombana Bay, 6 bis 7 Meilen SW. Bunbury [6–7 miles SW of Bunbury], Hamburger südwest-australische Forschungsreise 1905 stat. 56; 14.5–18 m depth; 28 Jul. 1905; Johann Wilhelm Michaelsen and Heinrich Robert Hermann Hartmeyer leg.; Felsboden mit spärlichem Pflanzenwuchs [rocky bottom with sparse plant growth], in seichten, der Körperform des Tieres entsprechenden Aushöhlungen an der Oberfläche des Schwammes *Biemna arenifibrosa* Hentschel, 1911 [in shallow hollows corresponding with the body shape of the animal on the surface of the sponge *Biemna arenifibrosa* Hentschel, 1911 (*Desmacella arenifibrosa* Hentschel, 1911)]; **ZMH-ANN-V10074** • 1 cs; same data as preceding; **ZMH-ANN-V07877**.

Remarks. Augener (1913) based his description on five specimens from the same locality, and the three other syntypes are in Berlin (two spm: ZMB 5234 & one spm: ZMB 6711).

Annelida: Errantia: Protodriliformia

Polygordiidae Czerniavsky, 1881

***Polygordius pacificus floreanensis* Schmidt & Westheide, 1977**

Holotype. Ecuador • 1 cs; [Galápagos], Floreana, Black Beach; Jun. 1972; Wilfried Westheide leg.; grober schwarzer Lava-Sand, unteres Eulitoral [coarse black lava sand, lower eulittoral]; **ZMH-ANN-P13668**.

Remarks. The description was based on approximately 57 specimens, but only a holotype was explicitly designated and its accession number was included (Schmidt and Westheide 1977).

Protodrilidae

***Protodrilus gelderi* Riser, 1997**

Holotype. United States Of America • 1 ♀, whole mount, with allotype; Massachusetts, Nahant Bay, off north side of Egg Rock; 42°26'N, 70°54'W [42.43, -70.90]; 20 m depth; 22 Jan. 1979; Nathan W. Riser leg.; coarse shelly sand; **ZMH-ANN-P23532**.

Allotype. United States Of America • 1 ♂, whole mount, with holotype; same data as holotype; **ZMH-ANN-P23533**.

Remarks. Both specimens were mounted on the same microscope slide, but cataloged under separate accession numbers, which were cited in the original description (Riser 1997). Paratypes were deposited in AMNH, MNHN and USNM.

***Protodrilus gracilis* von Nordheim, 1989**
accepted as *Meiodrilus gracilis* (von Nordheim, 1989)

Holotype. Germany • 1 ♂, whole mount; German Bight, Helgoland; 20 m depth; 10 Jul. 1986; Henning von Nordheim leg.; *Amphioxus*-Grund [*Amphioxus* substrate]; **ZMH-ANN-P18973**.

Paratypes. Germany • 1 ♂, whole mount; same data as holotype; **ZMH-ANN-P18974** • 4 spm; same data as holotype; **ZMH-ANN-P18975**.

Remarks. The ZMH accession numbers were specified in the original publication (von Nordheim 1989). Additional paratypes were retained in the author's collection.

***Protodrilus haurakiensis* von Nordheim, 1989**
accepted as *Lindrilus haurakiensis* (von Nordheim, 1989)

Holotype. New Zealand • 1 ♂, whole mount; Hauraki Gulf, Marine Laboratory of the University of Auckland at Leigh, Goat Island Beach; 5 m depth; Apr. 1983; Henning von Nordheim leg.; low water mark; **ZMH-ANN-P18976**.

Paratypes. New Zealand • 7 spms; same data as holotype; **ZMH-ANN-P18977**.

Remarks. The ZMH accession numbers were specified in the original publication (von Nordheim 1989). Additional paratypes were deposited in the NMNZ and retained in the author's collection.

***Protodrilus helgolandicus* von Nordheim, 1983**
accepted as *Claudrilus helgolandicus* (von Nordheim, 1983)

Holotype. Germany • 1 ♂, whole mount, with two ♀ spm; Helgoland; 6 Jun. 1981; Henning von Nordheim leg.; Interstitial, Sublitoral; **ZMH-ANN-P17407**.

Remarks. The ZMH card catalog and ledger book indicate the two female specimens as paratypes; however, the slide label indicates only the male specimen as the "Typus". According to the original description, the paratypes were retained in the author's collection (von Nordheim 1983). Based on the available information, we do not consider the two female specimens mounted with the holotype as paratypes.

***Protodrilus infundibuliformis* Schmidt & Westheide, 1977**
Fig. 4

Holotype. Ecuador • 4 photographs only; Galápagos, Santa Cruz, Bahía Academy, Nordseite [north side]; Jun. 1972; Wilfried Westheide leg.; Eulitoral, Schillsediment [eulittoral, shill sediment]; **ZMH-ANN-P13664**.

Remarks. None of the original specimens were preserved, and the authors designated four photographs deposited at ZMH as the holotype in lieu of a specimen (Schmidt and Westheide 1977). The original physical photographs were digitized and are stored in the ZMH card catalog.

***Protodrilus jagersteni* von Nordheim, 1989**

Holotype. New Zealand • 1 ♂, whole slide mount; Hauraki Gulf, Marine Laboratory of the University of Auckland at Leigh, Goat Island Channel; 3 m depth; Apr. 1983; Henning von Nordheim leg.; **ZMH-ANN-P18978**.

Paratypes. New Zealand • 10 spm; same data as holotype; **ZMH-ANN-P18979**.

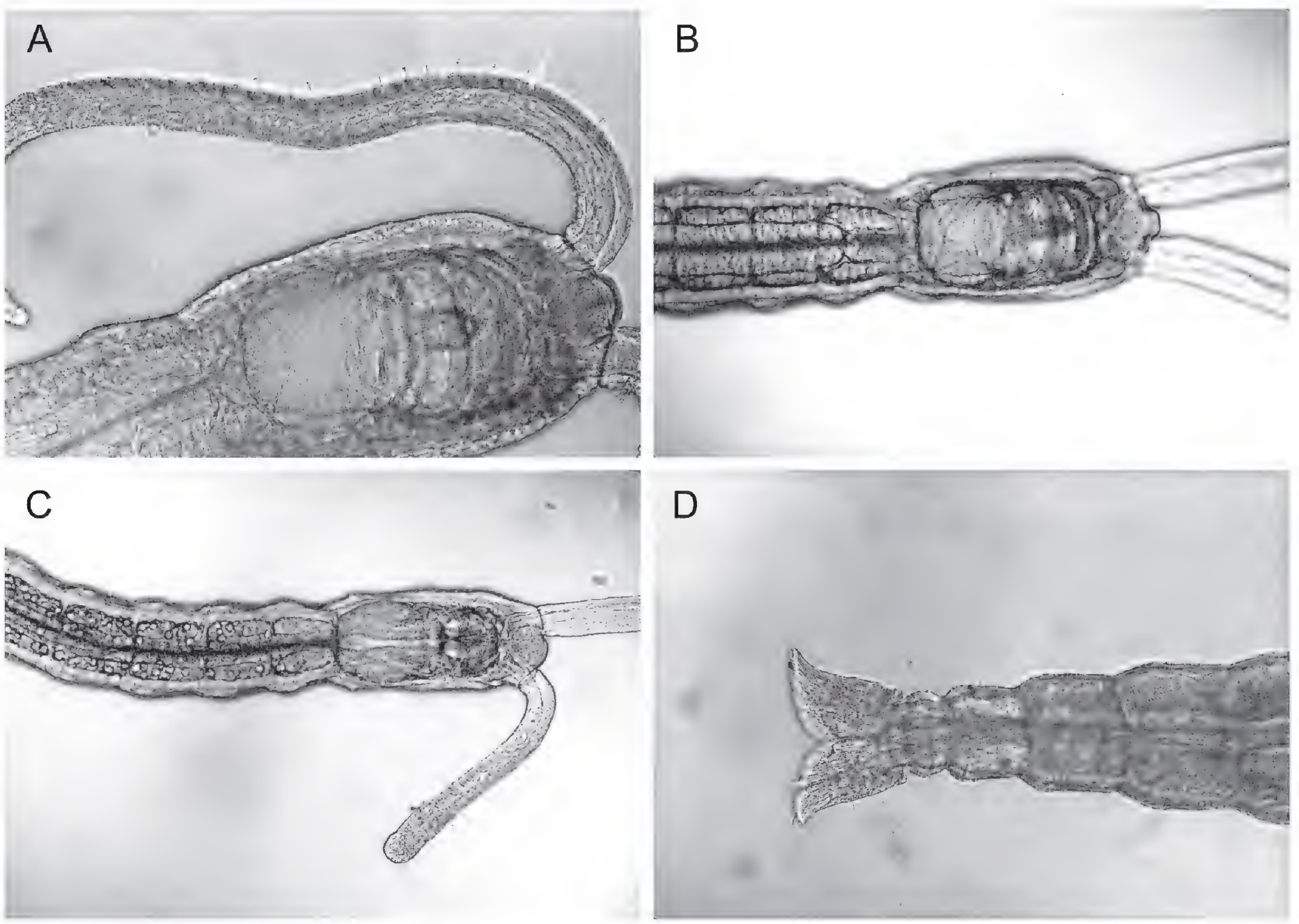

Figure 4. *Protodrilus infundibuliformis* Schmidt & Westheide, 1977, holotype, photographs deposited in lieu of a physical specimen.

Remarks. The ZMH accession numbers were specified in the original publication (von Nordheim 1989). Additional paratypes were deposited in the NMNZ and retained in the author's collection.

***Protodrilus jouinae* von Nordheim, 1989**
accepted as *Meiodrilus jouinae* (von Nordheim, 1989)

Holotype. New Zealand • 1 ♀, whole mount; Hauraki Gulf, Marine Laboratory of the University of Auckland at Leigh, Goat Island Beach; 5 m depth; 10 Feb. 1985; Henning von Nordheim leg.; intertidal, medium to high water mark; **ZMH-ANN-P18980**.

Paratypes. New Zealand • 4 spm; same data as holotype; **ZMH-ANN-P18981**.

Remarks. The ZMH accession numbers were specified in the original publication (von Nordheim 1989). Additional paratypes were deposited in the NMNZ and retained in the author's collection.

***Protodrilus litoralis* von Nordheim, 1989**

Holotype. New Zealand • 1 ♀, whole slide mount; Hauraki Gulf, Marine Laboratory of the University of Auckland at Leigh, Silk Tree Beach; Apr. 1983; Henning von Nordheim leg.; low water mark; **ZMH-ANN-P18982**.

Paratypes. New Zealand • 12 spm; same data as holotype; **ZMH-ANN-P18983**.

Remarks. The ZMH accession numbers were specified in the original publication (von Nordheim 1989). Additional paratypes were deposited in the NMNZ and retained in the author's collection.

***Protodrilus submersus* von Nordheim, 1989**

Holotype. New Zealand • 1 ♂, whole slide mount; Hauraki Gulf, Marine Laboratory of the University of Auckland at Leigh, Goat Island Channel; 3 m depth; 19 Feb. 1985; Henning von Nordheim leg.; **ZMH-ANN-P18984**.

Paratypes. New Zealand • 8 spm; same data as holotype; **ZMH-ANN-P18985**.

Remarks. The ZMH accession numbers were specified in the original publication (von Nordheim 1989). Additional paratypes were deposited in the NMNZ and retained in the author's collection.

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